This Page Is Inserted by IFW Operations and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

THIS PAGE BLANK (USETO)

```
AAW07343
ID AAW0
XX AAW
AC AAW
AC AAW
DT 03-,
XX Par
CX Par
-XX Par
-KW C2V
KW Hum
-KW C2V
KW Imm
XX Hum
-XX H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 21; Consert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HIV-1; AIDS; human immunodeficiency virus acquired immunodeficiency syndrome; group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence is a partial gp41 protein of Human Immunodeficiency Virus Type 1 (HIV-1) strain ESS. HIV is the principle actiological agent for acquired immunodeficiency syndrome (AIDS) gp41 is a HIV envelope protein, and may be used as an antigen for the detection of antibodies produced in response to HIV infection. ESS is a member of HIV group O (outlier). The present sequence is the immunodominant region of gp41. This sequence was used in a sequence homology alignment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New antigenic peptides and peptide functional derivatives, useful for detection of antibodies produced in response to human immunodeficiency virus group O antibodies -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-NOV-1998;
08-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ,29-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EP1013766-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human immunodeficiency virus type 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Partial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB12236
                                                                                                                                     C2V3-env; gp41; gag; reprimer; hybridisation;
                                                                                                                                        Human immunodeficiency virus type 1; HIV-1; envelop; group M; group O; C2V3-env; gp41; gag; retrovirus; strain; gp120; hypervariable loop; primer; hybridisation; amplification; PCR; polymerase chain reaction;
                                                                                                                                                                                                                                                                                                           03-JUN-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of gp41. This sequence which in turn was used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-402205/35.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           De Leys R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ORTH-) ORTHO-CLINICAL DIAGNOSTICS INC
  WO9627013
                                                                                                                                                                                                                                                    Partial sequence of gp41 from HIV-1 gp. O strain BCF02 (ESS).
                                                                                                                                                                                                                                                                                                                                                                                                                          AAW07343 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example
                                                             Human immunodeficiency virus type 1.
                                                                                                                 .mmunogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |||:|:|| ||||||||||:|||| :|:
etliqnqqllnswgckgrivcytsvkwn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ETLMODOORLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fig 1; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zheng J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-0110292.
99US-0119138.
99US-0433428.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99EP-0309491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of HIV-1 strain ESS gp41 immunodominant region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     75.7%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     to derive a consensus sequence peptide: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 131; DB 21;
Pred. No. 8.2e-12;
5; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                          ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            type 1; immunodominant region; O HIV; gp41; ESS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
AAW80469
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CC divided into 2 major groups based on the nuclectide sequences of the CC divided into 2 major groups based on the nuclectide sequences of the CC envelop gene (env): group M containing sub-groups A-G, and group O CC containing the strains ANT70 and MVP5180. The invention relates to the CC discovery of several new strains of HTV-1 which can be placed in group O, CC based on the partial sequences of the C2V3-env, gp41 and gag genes (see CC ANT44907-39 and ANM07329-64). The novel strains have been deposited as CC retroviruses CNCM I-1544 (BCF02 (ESS)) 1543 (BCF01 (FAN)), 1546 (BCF07 (C (MAN)), 1547 (BCF08 (NKO)) and 1545 (BCF03 (PCC)). The sequence CC presented here is from the strain BCF02 (ESS) and corresponds to a CC fragment of the gp41 protein encoded by the env gene. The nucleic acids CC can be used to detect gp. O HIV-1 strains by hybridisation or (as CC crimers) by gene amplification, also for screening and typing of such CC strains. Peptides encoded by the nucleic acids can be used as immunogens CC to raise Ab for detecting gp. O HIV-1.
                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1996-412779/41.
N-PSDB; AAT44918.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 12; Page 33; 71pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antibodies -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chaix-Baudier ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ASSI-) ASSISTANCE PUBLIQUE HOPITAUX PARIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-FEB-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-SEP-1996
                                                                                                                                                                        Group O human immune deficiency virus; HIV; detection; infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New strains of HIV-1
              24-FEB-1998;
09-APR-1997;
                                                     06-APR-1998;
                                                                              15-OCT-1998.
                                                                                                                                               Synthetic
                                                                                                                                                                                                 Peptide derived from
                                                                                                                                                                                                                            28-JAN-1999
                                                                                                                                                                                                                                                       AAW80469
                                                                                                                                                                                                                                                                                 AAW80469 standard; peptide;
                                                                                                                                  [mmune
                                                                                                                                                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                                                3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                            etliqnqqllnswgckgrivcytsvkwn
                                                                                                                                  deficiency virus
                                                                                                                                                                                                                                                                                                                                                                                                       21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        useful
                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95FR-0002236
              98FR-0002212
97FR-0004356
                                                     98WO-FR00691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96WO-FR00294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Loussert-Ajaka I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 group O, related DNA fragments, peptide(s) for diagnosis, screening and typing, or as
                                                                                                                                                                                                                                                                                                                                                                                                                  75.7%;
75.0%;
                                                                                                                                                                                                   a conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    French
                                                                                                                                                                                                                                                                                   32
                                                                                                                                                                                                                                                                                                                                                                                                         <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                     Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                Score 131;
                                                                                                                                                                                                                                                                                   Ą
                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                   sequence of group
                                                                                                                                                                                                                                                                                                                                                                                                                     No. le-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDICALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ly T,
                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Saragosti S,
                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 40;
                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Simon
                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ŧ
```

```
Page 5
```

```
δÃ
                                                                                       RESULT
AAB12254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .
88888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                          Query Match
Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                       The present sequence is peptide 147 of Human Immunodeficiency Virus Type 1 (HIV-1). This sequence is a partial consensus sequence of the immunodominant region of gp41 protein derived from a variety of HIV-1 group O (outlier) strains: ANT70, MVP5180, VAU, DUR, POC, FAN, LOB, MAN, NAN, ESS, NKO, BCF09, BCF12, BCF13, BCF14, 686, ABT063, ABT124, ABT1123, ABT2156, 193Ha, CDC7755, CDC1897, HLD28, 1515, 1516, D47-2d, HCYT2C, Nr42 and PE41 (see AAB12207 to AAB12236). HIV is the principle aetiological agent for acquired immunodeficiency syndrome (AIDS). 9p41 is a HIV envelope protein, and so the present sequence may be used as an antigen for the detection of antibodies produced in response to HIV
                                                                                                                                                                                                                                                                                                                                                                                                                      30-NOV-1998;
08-FEB-1999;
04-NOV-1999;
                                                                                                                                                                                                                                                                                                        New antigenic peptides and
detection of antibodies pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           •HIV-1 gp41 immunodominant region consensus sequence peptide 147 \# 1.
                                                                                                                                                                                                                                                                   Claim 1; Page 35; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a HIV envelope protein, and so the present sequence may be used as an antigen for the detection of antibodies produced in response to HIV infection.
                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                              WPI; 2000-402205/35.
                                                                                                                                                                                                                                                                                                                                                                     De Leys R,
                                                                                                                                                                                                                                                                                                                                                                                             (ORTH-) ORTHO-CLINICAL DIAGNOSTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EP1013766-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human immunodeficiency virus type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          acquired
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB12254 standard;
                                                                                                                  Intection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB12254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
  æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \mathbf{L}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
 DQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  group O antibodies
                          l Similarity
22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IDS; human immunodeficiency
immunodeficiency syndrome;
                                                                                       23
                                                                                                                                                                                                                                                                                                                                                                     Zheng J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23
                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0110292.
99US-0119138.
99US-0433428.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99EP-0309491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      immunodeficiency virus type 1; antibody detection;
iciency syndrome; group 0 HIV; gp41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide;
                                   76.98;
95.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77.5%;
95.7%;
                                                                                                                                                                                                                                                                                                      produced
                                                                                                                                                                                                                                                                                                     peptide functional derivatives, useful for oduced in response to human immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.
                        Score 133; DE Pred. No. 2.9e 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 134; No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   les 0;
                                    DB 21;
.9e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21;
                          0;
                                                Length 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23;
                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                       Gaps
                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
Qy
                                                                                                                                                                                                   AAB12255
ID AAB1
ΧIJ
                       AAB12236
                                       RESULT
                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                            Query Match
Best Local S
                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-NOV-1998;
08-FEB-1999;
04-NOV-1999;
                                                                                                                                                                                                                                                                 Immunodeficiency Virus Type 1 (HIV-1). This sequence is a partial consensus sequence of the immunodominant region of gp41 protein derived from a variety of HIV-1 group O (outlier) Strains: ANT70, MVP5180, VAU, DUR, POC, FAN, LOB, MAN, MAN, ESS, NKO, BCF09, BCF12, BCF13, BCF14, 686, ABT063, ABT124, ABT1123, ABT2156, 193Ha, CDC7755, CDC1897, HLD28, 1515, 1516, D47-2d, HCYT2c, Nr42 and PE41 (see AAB12207 to AAB12236). HIV is the principle aethological agent for acquired immunodeficiency syndrome
        AAB12236 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                    New antigenic peptides and peptide functional derivatives, useful for detection of antibodies produced in response to human immunodeficiency virus group {\tt O} antibodies -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI;
                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                             (AIDS). gp41 is a HIV envelope protein, and so the present sequence used as an antigen for the detection of antibodies produced in response to HIV infection.
                                                                                                                                                                                                                                                                                                                                                                 The present sequence is a peptide 147 related peptide from Human
                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 35; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    De Leys R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human immunodeficiency virus type 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          acquired immunodeficiency syndrome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HIV-1; AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HIV-1 gp41 immunodominant region consensus sequence peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAB12255;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB12255 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EP1013766-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ORTH-) ORTHO-CLINICAL DIAGNOSTICS INC
                                      11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10
                                                                             N
                                                                                                        9 QQRLNSWGCKGRIICYTSARWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  qqrlnswgckgriicytsarwh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000-402205/35
                                                                                                                                  l Similarity
22; Conser
                                                                                                                                                                                                     23
                                                                                                                                 76.3%;
clarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zheng J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human immunodeficiency virus type 1; antibody detection; unodeficiency syndrome; group O HIV; gp41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                     AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0110292.
99US-0119138.
99US-0433428.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99EP-0309491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "Any natural amino acid apart from L-asparagine"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide;
           \frac{\omega}{3}
                                                                             23
                                                                                                     30
                                                                                                                                 0;
                                                                                                                                            Score 132; DB 21; Pred. No. 4e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23
           Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ā
                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                       and so the present sequence may
                                                                                                                                 0;
                                                                                                                                                          Length 23;
                                                                                                                                 0
                                                                                                                                Gaps
```

```
RESULT
AAB12257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                            30-NOV-1998;
08-FEB-1999;
04-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human Immunodeficiency Virus (HIV) is the principle aetiological agent for acquired immunodeficiency syndrome (AIDS). 9p41 is a HIV envelope protein, and may be used as an antigen for the detection of antibodles produced in response to HIV infection. Mosaic 9p41 proteins were constructed, in which the immunodominant region of group M HIV was replaced by the corresponding region from group O HIV. The mosaic 9p41 proteins would be useful as antigens, used in the detection of anti-group O HIV antibodies produced in response to HIV infection. The present seguence is a dihydrofolate reductase (DHFR) fusion protein of one such
                                                                                                                                                                                                                                                                                                                                                 T-AIH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New antigenic peptides and peptide functional derivatives, useful for detection of antibodies produced in response to human immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI;
 New antigenic peptides and peptide in detection of antibodies produced in
                                                                                                                                                                                                                                                                                   Human
                                                                                                                                                                                                                                                                                                         acquired
                                                                                                                                                                                                                                                                                                                                                                                                                   AAB12257 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      De Leys
                                                              De Leys
                                                                                                                                                             29-NOV-1999;
                                                                                                                                                                                     28-JUN-2000
                                                                                                                                                                                                            EP1013766-A2
                                                                                                                                                                                                                                                Misc-difference
                                                                                                                                                                                                                                                                                                                      HIV-1; AIDS; human immunodeficiency virus
                                                                                                                                                                                                                                                                                                                                                                        10-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                 AAB12257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mosaic protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 5; Fig 6; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              virus group
                                       WPI; 2000-402205/35.
                                                                                      (ORTH-) ORTHO-CLINICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ORTH-) ORTHO-CLINICAL DIAGNOSTICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          w
                                                                                                                                                                                                                                                                                                                                                                                                                                              7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000-402205/35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                etlmqnqqrlnswgckgriicytsarwh 267
                                                                                                                                                                                                                                                                                 immunodeficiency virus
                                                              ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₹
                                                                                                                                                                                                                                                                                                         immunodeficiency syndrome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              439 AA;
                                                                                                                                                                                                                                                                                                                                              immunodominant region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zheng
                                                              Zheng J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                            98US-0110292.
99US-0119138.
99US-0433428.
                                                                                                                                                           99EP-0309491
                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                    /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90.8%;
                                                                                      DIAGNOSTICS
                                                                                                                                                                                                                                 "Any natural amino
                                                                                                                                                                                                                                                                                                                                                                                                                       28
                                                                                                                                                                                                                                                                                  type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 157; DB 21;
Pred. No. 2.4e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                       ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                              consensus sequence
  functional derivatives, n response to human immur
                                                                                                                                                                                                                                                                                                         virus type 1; antibody group O HIV; gp41.
                                                                                                                                                                                                                                   acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                 apart from L-asparagine"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 439;
                                                                                                                                                                                                                                                                                                                                             peptide 147
wes, useful for immunodeficiency
                                                                                                                                                                                                                                                                                                                       detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                               #
3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
RESULT
AAB1225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                         30-NOV-1998;
08-FEB-1999;
04-NOV-1999;
The present sequence is peptide 147-4 from Human Immunodeficiency Virus Type 1 (HIV-1). This sequence is a partial consensus sequence of the immunodominant region of gp41 protein derived from a variety of HIV-1 group O (outlier) strains: ANT70, MVP5180, VAU, DUR, POC, FAN, LOB, MAN, ESS, NKO, BCF09, BCF12, BCF13, BCF14, 686, AB7063, ABT124, ABT1123, ABT2156, 193Ha, CDC7755, CDC1897, HLD28, 1515, 1516, D47-2d, HCYT2c, Nr42 and PE41 (see AAB12207 to AAB12236). HIV is the principle aetiological agent for acquired immunodeficiency syndrome (AIDS). gp41 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Immunodeficiency Virus Type 1 (HIV-1). This sequence is a partial consensus sequence of the immunodominant region of gp41 protein derived from a variety of HIV-1 group 0 (outler) strains: ANT70, MVP5180, VAU, DUR, POC, FAN, LOB, MAN, NAN, ESS, NKO, BCF09, BCF12, BCF13, BCF14, 686, ABT063, ABT124, ABT1123, ABT2156, 193Ha, CDC7755, CDC1897, HLD28, 1515, 1516, D47-2d, HCYT2c, Nr42 and PE41 (see AAB12207 to AAB12236). HIV is the principle actiological agent for acquired immunodeficiency syndrome (AIDS). gp41 is a HIV envelope protein, and so the present sequence may be used as an antigen for the detection of antibodies produced in
                                                                                                                                 Claim 1; Page 36; 52pp; English.
                                                                                                                                                             virus group O antibodies
                                                                                                                                                                         New antigenic peptides and peptide detection of antibodies produced
                                                                                                                                                                                                                        WPI;
                                                                                                                                                                                                                                                 De Leys
                                                                                                                                                                                                                                                                              (ORTH-) ORTHO-CLINICAL DIAGNOSTICS
                                                                                                                                                                                                                                                                                                                                                                                                                             EP1013766-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HIV-1; AIDS; acquired imm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HIV-1 gp41 immunodominant region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB12256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB12256 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence is a peptide 147 related peptide from Human Immunodeficiency Virus Type 1 (HIV-1). This sequence is a partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   virus group O antibodies
                                                                                                                                                                                                                                                                                                                                                                    29-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                28-JUN-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000-402205/35.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 96.4
27; Conservative
                                                                                                                                                                                                                                                 R, Zheng J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Page 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 immunodeficiency syndrome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                                                                                                                                                                                                        98US-0110292.
99US-0119138.
99US-0433428.
                                                                                                                                                                                                                                                                                                                                                                    99EP-0309491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           89.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      virus type
                                                                                                                                                                              peptide functional derivatives,
oduced in response to human immu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 155; DB 21;
Pred. No. 2.5e-15;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           consensus sequence peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virus
                                                                                                                                                                           iunctional derivatives, useful for
response to human immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    type 1; antibody O HIV; gp41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              147-4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , 1515,
1515,
```

```
us-09-605-573a-69.rag
```

```
RESULT
AABIZES3
ID AABI
XX AABI
AC AABI
XZ DIFF
XX UDIFF
XX DHFF
XX HIV-
KW ACQU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
AAB12261
                                                                                                                                                                                                                                  ρ
                                                                                                                                              В
                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-NOV-1998;
08-FEB-1999;
-04-NOV-1999;
                                                                                                                                                                                                                                                          Human Immunodeficiency Virus (HIV) is the principle aetiological agent for acquired immunodeficiency syndrome (AIDS). gp41 is a HIV envelope protein, and may be used as an antigen for the detection of antibodies produced in response to HIV infection. Mosaic gp41 proteins were constructed, in which the immunodominant region of group M HIV was replaced by the corresponding region from group O HIV. The mosaic gp41 proteins would be useful as antigens, used in the detection of anti-group O HIV antibodies produced in response to HIV infection. The present
                                                                                                                                                                                                                                                                                                                                                                                                         WPI;
                                                                                                                                                                                                                                Sequence
         acquired
                   HIV-1; AIDS;
                                                                                                                                                                                                                                                                                                                                                 Claim 15; Page 37-38; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                acquired
                                      DHFR-hES-MH fusion
                                                         10-NOV-2000
                                                                                              AAB12253 standard;
                                                                                                                                                                                                                                                                                                                                                                   detection of antibodies produced in response to human immunodeficiency virus group O antibodies -
                                                                                                                                                                                                                                                                                                                                                                                      New antigenic peptides and peptide functional derivatives, useful for
                                                                                                                                                                                                                                                                                                                                                                                                                            De Leys R,
                                                                                                                                                                                                                                                                                                                                                                                                                                              (ORTH-) ORTHO-CLINICAL DIAGNOSTICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EP1013766-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HIV group M/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB12261;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB12261 standard;
                                                                             AAB12253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HIV-1; AIDS;
                                                                                                                                              44
                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                  თ
                                                                                                                                             etlmqnqqrlnswgckgriicytsarwh 71
                                                                                                                                                                ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                           2000-402205/35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunodeficiency virus
          immunodeficiency
                                                                                                                                                                                                                                                    is one such mosaic protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immunodeficiency
                                                                                                                                                                                                                                  220 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                            Zheng J;
         human immunodeficiency virus type 1; DHFR-hES-MH; unodeficiency syndrome; group O HIV; gp41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             group
                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0110292.
99US-0119138.
99US-0433428.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99EP-0309491
                                     protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immunodeficiency virus type 1;
iciency syndrome; group O HIV; gp41
                                                                                              peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O mosaic protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide; 220 AA
                                                                                                                                                                                          90.8%;
                                                                                                368
                                                                                                                                                                                           Score 157;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              type 1.
                                                                                               A
                                                                                                                                                                                   Mismatches
                                                                                                                                                                                           DB 21;
.1e-14;
                                                                                                                                                                                                    Length 220;
                                                                                                                                                                                   Indels
                                                                                                                                                                                   0;
                                                                                                                                                                                  Gaps
                                                                                                                                                                                   0
PR PR XXX
                                                                                                                                                                                                                                                                                                                                                  QУ
                                                                                                                                                                                                                                                              DЪ
                                                                                                                                                                                                               IJ
                                                                                                                                                                                                                         AAB12252
                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 27
30-NOV-1998;
08-FEB-1999;
04-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-NOV-1998;
08-FEB-1999;
04-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                              Human immunodeficiency virus type Unidentified.
                                                                                                                         acquired
                                                                                                                          HIV-1; AIDS; human immunodeficiency virus type 1; DHFR-hENV-MH; acquired immunodeficiency syndrome; group O HIV; gp41.
                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                       DHFR-hENV-MH
                                                                                                                                                                                             AAB12252;
                                                                                                                                                                                                               AAB12252 standard;
                                                                                                                                                                                                                                                                                                                                                                    mosaic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     De Leys R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EP1013766-A2
                                      29-NOV-1999;
                                                         28-JUN-2000
                                                                           EP1013766-A2
                                                                                                                                                                          10-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-JUN-2000
                                                                                                                                                                                                                                                           6
                                                                                                                                                       tusion
```

(first

protein. entry) peptide;

439

₿

0

98US-0110292. 99US-0119138. 99US-0433428.

99EP-0309491

```
agent for acquired immunodeficiency syndrome (AIDS). gp41 is a HIV envelope protein, and may be used as an antigen for the detection of antibodies produced in response to HIV infection. Mosaic gp41 proteins were constructed, in which the immunodominant region of group M HIV was replaced by the corresponding region from group O HIV. The mosaic gp41 proteins would be useful as antigens, used in the detection of anti-group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   virus group O antibodies -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human immunodeficiency virus type 1. Unidentified.
                                                                                                                                                                                 U HIV antibodies produced in response to HIV infection. The present sequence is a dihydrofolate reductase (DHFR) fusion protein of one
                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 5; Fig 6; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New antigenic peptides and detection of antibodies pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ORTH-) ORTHO-CLINICAL DIAGNOSTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-402205/35.
                                                                                                                                                                                                                                                                                                                                                                                         Immunodeficiency Virus (HIV) is the principle aetiological
                                                                                                                                                                    protein.
Similarity 96.4
27; Conservative
                                                                                                                       368 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zheng J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0119138
99US-0433428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0110292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99EP-0309491
                    90.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peptide functional derivatives, oduced in response to human immur
                    Score 157; DB 2:
Pred. No. 2e-14;
  Mismatches
                                                DB 21;
0;
                                             Length 368;
  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          useful for
0;
                                                                                                                                                                                              one such
Gaps
```

Claim 1;

Page

36;

52pp;

English

19

```
RESULT
AAB12259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
The present sequence is a group O Human Immunodeficiency Virus Type 1 (HIV-1) gp41 peptide. HIV is the principle actiological agent for acquired immunodeficiency syndrome (AIDS). gp41 is a HIV envelope protein. The present sequence was derived from a sequence homology alignment of group O and group M HIV gp41 descending helix sequences. The present sequence was used as a group O replacement peptide, where was used to construct mosaic gp41 proteins, in which the group M manunodominant region was replaced by the present sequence. The mosaic gp41 proteins (AAB12261 and AAB12262) would be useful as antigens, whi
                                                                                                                                                                                       New antigenic peptides and peptide functional derivatives, useful for detection of antibodies produced in response to human immunodeficiency virus group O antibodies -
                                                                                                                                                        Claim 1; Page 37; 52pp; English.
                                                                                                                                                                                                                                                       WPI; 2000-402205/35.
                                                                                                                                                                                                                                                                                     De Leys
                                                                                                                                                                                                                                                                                                                                                              30-NOV-1998;
08-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                          28-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Type 1 (HIV-1). This sequence is a partial consensus sequence of the immunodominant region of gp41 protein derived from a variety of HIV-1 group O (outlier) strains: ANTO, MVP5180, VAU, DUR, POC, FAN, LOB, MAN, NAN, ESS, NKO, BCF09, BCF12, BCF13, BCF14, 686, ABT063, ABT124, ABT1123, ABT2156, 193Ha, CDC7755, CDC1897, HLD28, 1515, 1516, D47-2d, HCYT2C, ABT126, 193Ha, CDC7755, CDC1897, HLD28, 1515, 1516, D47-2d, HCYT2C, NC42 and PE41 (see AAB12207 to AAB12236). HIV is the principle aetiological agent for acquired immunodeficiency syndrome (AIDS). gp41 is align for the detection of antibodies produced in response to HIV
                                                                                                                                                                                                                                                                                                               (ORTH-) ORTHO-CLINICAL DIAGNOSTICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HIV-1; AIDS; human immunodeficiency virus type 1; antibody detection; acquired immunodeficiency syndrome; group O HIV; gp41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB12259 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                             29-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EP1013766-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB12259;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence Type 1 (HIV-1). This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 100 hes 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GRETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gretlmqdqqrlnswgckgrlicytsarwh 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immunodeficiency virus type 1.
                                                                                                                                                                                                                                                                                     æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                             98US-0110292.
99US-0119138.
99US-0433428.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          $
                                                                                                                                                                                                                                                                                                                                                                                                           99EP-0309491.
                                                                                                                                                                                                                                                                                   Ċ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             replacement peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide 147-5 from Human Immunodeficiency Virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 173; DB 21;
Pred. No. 6.9e-18;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
 The mosaic
rigens, which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                              it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

7

밁 Q

w

44 etlmqnqqrlnswgckgriicytsarwh

71

ETLMQDQQRLNSWGCKGRIICYTSARWH 30

Query Match Best Local S Matches 27

27; Conser

Conservative

96.4%;

Score 157; DB 21; Pred. No. 7.5e-15; l; Mismatches 0

Length 149;

Indels

0

0

Sequence

149 AA;

```
RESULT
AAB12262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ೧೧ೱೱ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
               Human Immunodeficiency Virus (HIV) is the principle aetiological agent for acquired immunodeficiency syndrome (AIDS). gp41 is a HIV envelope protein, and may be used as an antigen for the detection of antibodies produced in response to HIV infection. Mosaic gp41 proteins were constructed, in which the immunodominant region of group M HIV was replaced by the corresponding region from group O HIV. The mosaic gp41 proteins would be useful as antigens, used in the detection of anti-group O HIV antibodies produced in response to HIV infection. The present sequence is one such mosaic protein.
                                                                                                                                                                                                                                                                                     30-NOV-1998;
08-FEB-1999;
04-NOV-1999;
                                                                                                                                             Claim
                                                                                                                                                                New antigenic peptides and peptide functional derivatives, useful for detection of antibodies produced in response to human immunodeficienc virus group O antibodies -
                                                                                                                                                                                                                                      De Leys R,
                                                                                                                                                                                                                                                                                                                                     29-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                          28-JUN-2000.
                                                                                                                                                                                                                                                                                                                                                                                  EP1013766-A2
                                                                                                                                                                                                                                                                                                                                                                                                          Human
                                                                                                                                                                                                                                                                                                                                                                                                                                 acquired
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HIV group M/
                                                                                                                                                                                                                                                              (ORTH-) ORTHO-CLINICAL DIAGNOSTICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                            HIV-1; AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB12262;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB12262 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 would be used for the detection of anti-group O HIV antibodies produced in response to HIV infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                          15;
                                                                                                                                                                                                                                                                                                                                                                                                        immunodeficiency virus type 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l Similarity
27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                immunodeficiency
                                                                                                                                         Page 38-39; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            35 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  group O mosaic protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                    98US-0110292.
99US-0119138.
99US-0433428.
                                                                                                                                                                                                                                                                                                                                   99EP-0309491
                                                                                                                                                                                                                                                                                                                                                                                                                                        immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                              syndrome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 157;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35
                                                                                                                                                                          response to human immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                             virus type 1 group O HIV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 21;
.6e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                             gp41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                                                                                                                                                                          Result
                                                                                                                                                                                                                                                      No.
                                                                                                                                                                                                                                                                                                                                                        pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A_Geneseq_032802:*
1: /SIDS1/gcdA**
2: /STDC1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-605-573A-69
173
1 GRETLMQDQQRLNSW
100.0

90.8

90.8

90.8

90.8

90.8

90.8

90.8

77.5

76.9

76.3

75.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           June 20, 2002, 15:26:17; Search time 29.93 Seconds (without alignments) 111.334 Million cell updates/sec
                                                                                                                                                                                                                                                      Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                 18:
19:
20:
21:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10:
11:
12:
13:
14:
14:
15:
16:
                                                                                                                                                                                                                                                                            Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              747574 seqs, 111073796 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                        SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA1990.DAT:*

SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA1991.DAT:*

SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA1991.DAT:*

SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA1993.DAT:*

SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA1993.DAT:*

SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA1995.DAT:*

SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA1995.DAT:*

SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA1995.DAT:*

SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA1999.DAT:*

SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA1999.DAT:*

SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA2000.DAT:*

SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA2000.DAT:*

SIDSI/gcgdata/hold-geneseq/geneseqp-embl/AA2000.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GRETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1980.DAT:*
/SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1981.DAT:*
/SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1982.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1986.DAT:*
/SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1987.DAT:*
/SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1988.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1983.DAT:*
/SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1984.DAT:*
/SIDS1/gcgdata/hold-geneseq/geneseqp-embl/AA1985.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /SIDS1/gcgdata/hold-geneseq/geneseqp-emb1/AA1989.DAT:*
                                                                                                                                                                                                                                                        Length
                                                                                                      149
220
368
439
                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                        IJ
AAB12264
AAB12259
AAB12261
AAB12261
AAB12253
AAB12257
AAB12257
AAB12256
AAB12256
AAB12256
AAB12256
                                                                                                                                                                                                                                                                                                                    SUMMARIES
                 HIV-1 9p41 immunod
Group O HIV-1 9p41
HIV 9roup M/ 9roup
HIV 9roup M/ 9roup
DHFR-hES-MH fusion
DHFR-hENV-MH fusion
HIV-1 9p41 immunod
HIV-1 9p41 immunod
HIV-1 9p41 immunod
                                                                                                                                                                                                                                                        Description
    sequence o
```

126 72.8	72.	73.	73	73	73.	73.	~1	73.	~1	73.	73.	74.	74.	74.	74.	74.	74.	74.	74	74.	74.	74.	74.	74.	74.	74.	74	74.	75.	75.	75.	130 75.1	75.	
40 17																																	40 17	
AAW07345	AAB12230	56	73	625	AAY55786	AAY67615	T)	AAY79777	\sim		AAG65201			AAY22909			AAY55784		AAY31617	AAW93073	AAR51690	2		AAB12216	AAB12215	AAB12208	AAW07346	AAB12231	AAY05554	AAY67606	AAB12229	AAW80469	AAW07343	
																																	•	
•	ial sequen	HIV-1 group O isol	ial sequen	ige	(Group O) pe	#15 IC	Peptide #13 for de	etion re	elic bebri	sequence	mmunoderic	MVP-5	-5180/91 rragm	ID NO. 1	1-HIV-1 grou	-1 gp41 antige	gp41 an	tide #/	HIV mutan	isolate	-type virus M	ial s	al sequence	ial sequence	l sequence	⊢ 8	G	ial sequence	group o iso	ide #6 for	1 sequenc	ide derived i	artial sequence	

ALIGNMENTS

RESULT AAB12264

AAB12264 standard; peptide;

30

AAB12264;

PT PT XXX 30-NOV-1998; 08-FEB-1999; 04-NOV-1999; ${
m HIV}\text{-1; AIDS;}$ human immunodeficiency virus type 1; antibody detection; acquired immunodeficiency syndrome; group O HIV; ${
m gp41.}$ HIV-1 gp41 immunodominant region consensus sequence peptide 147-5. 10-NOV-2000 De Leys R, (ORTH-) ORTHO-CLINICAL DIAGNOSTICS INC 29-NOV-1999; 28-JUN-2000 EP1013766-A2. Human immunodeficiency virus type 1. Zheng J; (first entry) 98US-0110292. 99US-0119138. 99US-0433428. 99EP-0309491

New antigenic peptides and peptide functional derivatives, useful for detection of antibodies produced in response to human immunodeficiency virus group O antibodies – $\,$

WPI; 2000-402205/35.

(SNFI) PASTEUR SANOF .

FICS SA

Delagneau

Gadelle SJX,

Rieunier

0

```
RESULT 1
AAB12229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                               30-NOV-1998;
08-FEB-1999;
04-NOV-1999;
The present sequence is a partial gp41 protein of Human Immunodeficiency Virus Type 1 (HIV-1) strain HLD28. HIV is the principle actiological agent for acquired immunodeficiency syndrome (AIDS). gp41 is a HIV envelope protein, and may be used as an antigen for the detection of antibodies produced in response to HIV infection. HLD28 is a member of HIV group O (outlier). The present sequence is the immunodominant region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AW80459-74 represent synthetic peptides (either linear or cyclised cys-Cys disulphide bonds). The peptides represent variable sequences connected around short highly conserved sequences present in isolate of group O human immune deficiency virus (HIV). The peptides are useful as immunological reagents for detecting infection by group O
                                                                                                               New antigenic peptides and peptide functional derivatives, useful for detection of antibodies produced in response to human immunodeficiency virus group O antibodies -
                                                                                                                                                                                                                                                                                                                              EP1013766-A2
                                                                                                                                                                                                                                                                                                                                                   Human immunodeficiency virus type
                                                                                                                                                                                                                                                                                                                                                                           acquired
                                                                                                                                                                                                                                                                                                                                                                                       HIV-1; AIDS; human
                                                                                                                                                                                                                                                                                                                                                                                                             Partial sequence
                                                                                   Example 1;
                                                                                                                                                                                 De Leys R,
                                                                                                                                                                                                                                                                              29-NOV-1999;
                                                                                                                                                                                                                                                                                                      28-JUN-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                      10-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB12229;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB12229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1998-583190/49.
                                                                                                                                                                                                         (ORTH-) ORTHO-CLINICAL DIAGNOSTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New synthetic peptide(s) - useful for, human immune deficiency virus of group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000-402205/35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               immune deficiency virus (HIV).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.
                                                                                                          group O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                           immunodeficiency syndrome;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Page 44;
                                                                                   Fig 1; 52pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32
                                                                                                                                                                                 Zheng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ŗ,
                                                                                                           antibodies
                                                                                                                                                                                                                              98US-0110292.
99US-0119138.
99US-0433428.
                                                                                                                                                                                                                                                                              99EP-0309491
                                                                                                                                                                                                                                                                                                                                                                                                              of HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               55pp;
                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                          immunodeficiency virus type 1; immunodominant region; iciency syndrome; group O HIV; gp41; HLD28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        75.18;
71.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 French
                                                                                                                                                                                                                                                                                                                                                                                                             strain HLD28 gp41 immunodominant region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 19;
.1e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  detecting infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 isolates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   þу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         γď
```

```
CC This peptide is derived from the human immunodeficiency virus (HIV)-1 CC gp41 envelope protein, and is useful for detecting HIV-1 group O CC infection. The invention relates to peptides derived from HIV-1 which CC have been modified for use as diagnostic antigens in the treatment or CC prevention of infection. The structural stability of the peptides can be CC increased in four different ways; through the replacement of a CC hydrophobic amino acid with a less hydrophobic amino acid; through an CC increase in the amount of secondary structure (i.e. alpha helix) in the CC peptide; through the removal of a positive charge from the peptide, or CC through the constraint of the epitides contains the formation of a covalent crosslink Modified peptides of the invention are used to detect CC infectious agents specifically HJV-1. Other detectable agents include CC Group O viruses; human T-cell lymphotropic virus-I or -I; hepatitis C and the causative agent of syphilis. The peptides can be used for CC expressed from a transgene). More generally almost any peptide can be similarly modified, e.g. cytokines and interferons; major thistocompatibility complex antigens; hormones; growth factors; tumour CC markers or suppressors, or antigens from many other pathogens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY67606
ID AAY6
 SSSS S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUN-1998;
01-SEP-1998;
15-SEP-1998;
28-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of gp41. which in
                                                                                                                                                                                                                                                                                                                                                                           WPI;
                                                                                                                                                                                                                                                                                                                                                                                                      Chowdhury
                                                                                                                                                                                                                                                                                                     Claim 18;
                                                                                                                                                                                                                                                                                                                              Improving properties of peptides for use preventing or treating infections -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9962945-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human immunodeficiency virus-1; HIV-1; gp41 envelope increased structural stability; diagnostic antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY67606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide #6 for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY67606 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                 (PEPT-) PEPTIDE SOLUTIONS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gp41. This sequence was used in a sequence homology alignment,
ch in turn was used to derive a consensus sequence peptide: pe
(AAB12254).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          etlmqnqqrldlwgckgrlicytsvkwn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                   Page 61; 83pp;
                                                                                                                                                                                                                                                                                                                                                                                                        MA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-0098705.
98US-0100422.
99WO-US01726.
                                                                                                                                                                                                                                                                                                                                                                                                     Bernstein D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0088229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US12446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              detecting HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   75.1%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .0%;
                                                                                                                                                                                                                                                                                                   English
                                                                                                                                                                                                                                                                                                                                                                                                        Motsenbocker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 130; DE
Pred. No. 1.1e
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              group O infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33
                                                                                                                                                                                                                                                                                                                                               as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .1e-11;
                                                                                                                                                                                                                                                                                                                                                                                                        ×
                                                                                                                                                                                                                                                                                                                                             diagnostic antigens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein; detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide
                                                                                                                                                                                                                                                                                                                                               ဝူ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                               for
```

0;

SQ

Sequence 36 AA;

Qy Search completed: June 20, 2002, 15:31:31 Job time: 314 sec 뭥 Query Match 75.1%; Score 130; DB 21; Length 36; Best Local Similarity 75.0%; Pred. No. 1.3e-11; Matches 21; Conservative 5; Mismatches 2; Indels 0; Gaps 0;

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post_processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Run on:
                                                                                                                                                                                                                                                                                                                   Result
   Pred. No. score great and is der
                                                                                                                                                                                                                                                                                                        Score
                                                                                                                                                                                                                                                                                                                                                            is derived by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seq
                                                                                                                                                                                                                                                                                                                                                           No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length:
length:
                                                                                                                                                                                                                                                                                                        Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                     Issued_Patents_AA.*

1: /cgn2_6/ptodata/2/1aa/5A_COMB.pep:*
-2: /cgn2_6/ptodata/2/1aa/5B_COMB.pep:*
-3: /cgn2_6/ptodata/2/1aa/6A_COMB.pep:*
-4: /cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
-5: /cgn2_6/ptodata/2/1aa/FCTUS_COMB.pep:*
-5: /cgn2_6/ptodata/2/1aa/Dackfiles1.pep:*
                                                                                                                                                                                                                                                100.0
96.0
90.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          June 20, 2002, 15:28:12 ; Search time 12.97 Seconds (without alignments)
56.497 Million cell updates/sec
  BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-605-573A-69
173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         231628 seqs, 24425594 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version Copyright (c) 1993 - 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GRETLMQDQQRLNSWGCKGRIICYTSARWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20000000000
  BG
US-09-433-428D-69
US-09-433-428D-67
US-09-433-428D-67
US-09-433-428D-67
US-09-433-428D-67
US-09-433-428D-69
US-09-433-428D-69
US-09-433-428D-60
US-09-433-428D-60
US-09-433-428D-30
US-09-433-428D-30
US-09-433-428D-30
US-09-433-428D-30
US-09-433-428D-25
US-09-433-428D-29
US-09-433-428D-29
US-09-433-428D-10
US-09-433-428D-10
US-09-433-428D-12
US-09-433-428D-12
US-09-433-428D-12
US-09-433-428D-12
US-09-433-428D-13
US-08-471-770-62
US-08-471-770-62
US-08-471-770-62
                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.5
Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       231628
                                                                                                                                                                                                                                                                                                        Description
 Sequence
                                                                                                                                                                                   Sequence
Sequence
Sequence
                                                                                                                                                                                                                   Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
39, Appli
9, Appli
10, Appli
11, Appli
12, Appli
13, Appli
13, Appli
62, Appli
62, Appli
62, Appli
                                                                                                                                                                30,
                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-433-428D-69
                                                                                                                                                                          US-09-433-428D-63
                                                                                                                                                                                                                                                               Matches
   FEATURE:
```

45	44	43	42	41	40	39	38	37	36	35	34	ω ω	32	31	30	29	28
125	125	125	125	125	126	126	126	127	127	127	128	128	128	128	128	128	128
72.3	72.3	72.3	72.3	72.3	72.8	72.8	72.8	73.4	73.4	73.4	74.0	74.0	74.0	74.0	74.0	74.0	74.0
356	356	40	40	33	40	40	ω ω	40	40	33	351	351	351	351	204	146	146
4	ר	4	ω	4	4	w	4	4	w	4	4	N	۲	۳	4	4	N
US-08-989-493-12	US-08-602-713-12	US-09-444-410-41	US-08-894-699-41	US-09-433-428D-20	US-09-444-410-38	US-08-894-699-38	US-09-433-428D-24	US-09-444-410-68	US-08-894-699-68	US-09-433-428D-6	US-09-109-916-46	US-08-468-059-46	US-08-471-770-46	US-08-470-202-46	US-08-965-056-105	US-09-131-551-10	US-08-394-021-10
Sequence 12, Appl	Sequence 12, Appl	Sequence 41, Appl,	Sequence 41, Appl	Sequence 20, Appl	Sequence 38, Appl	Sequence 38, Appl	Sequence 24, Appl	Sequence 68, Appl	Sequence 68, Appl	Sequence 6, Appli		Sequence 46, Appl			Sequence 105, App	Sequence 10, Appl	Sequence 10, Appl

ALIGNMENTS

```
GENERAL INFORMATION:
APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF
FILE REFERENCE: CDS-207
CURRENT APPLICATION NUMBER: US/09/433,428D
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 70
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 63
LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 69

LENGTH: 30

TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:
OTHER INFORMATION: Sequence
US-09-433-428D-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                       Sequence 63, Application US/09433428D Patent No. 6149910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 69, Application US/09433428D Patent No. 6149910
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/433,428D CURRENT FILING DATE: 1999-11-04 NUMBER OF SEQ ID NOS: 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: De Leys, Rol
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEI
FILE REFERENCE: CDS-20
LENGTH: 30
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                100.0%; ilarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ON: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Robert J
                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 173; DB 4;
Pred. No. 2.2e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                       ဝှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HIV Consensus
                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
```

```
APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
FITLE OF INVENTION: PEPTIDES FOR THE DETECTI
FILE REFERENCE: CDS-207
CURRENT APPLICATION NUMBER: US/09/433,428D
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 70
SEQ ID NO 66
SEQ ID NO 66
LENGTH: 220
                                                              ; OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus; OTHER INFORMATION: Sequence US-09-433-428D-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus ; OTHER INFORMATION: Sequence US-09-433-428D-63
                                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
US-09-433-428D-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus
OTHER INFORMATION: Sequence
US-09-433-428D-67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-433-428D-67
                                                                                                                                                                                                                                                                                                                                          Sequence 66, Application US/09433428D Patent No. 6149910 GENERAL INFORMATION:
 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 67
LENGTH: 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 67, Application US/09433428D Patent No. 6149910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: De Leys, Rot
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEI
FILE REFERENCE: CDS-207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/433,428D CURRENT FILING DATE: 1999-11-04 NUMBER OF SEQ ID NOS: 70 SOFTWARE: Patentin Ver. 2.0
                                                                                                                                 TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: Xaa is any amino acid LOCATION: 8
Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                               44 ETLMQNQQRLNSWGCKGRIICYTSARWH 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity nes 29; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GRETLMOXQORLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GRETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                        ON: PEPTIDES FOR THE DETECTION OF CDS-207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS-207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Robert J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PEPTIDES FOR THE DETECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 90.8%;
96.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96.0%;
96.7%;
 . 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 166; DB 4;
Pred. No. 2.4e-18;
0; Mismatches 1
 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 157; DB 4;
Pred. No. 3.1e-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
 157;
No. 4.
 DB 4;
.8e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 149;
              Length 220;
                                                                                                                                                                                                                                                                                            HIV-1 GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HIV-1 GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
; OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus; OTHER INFORMATION: Sequence US-09-433-428D-58
                                                                                                                              FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus
OTHER INFORMATION: Sequence
US-09-433-428D-57
    В
                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Watches 27; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
US-09-433-428D-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                  US-09-433-428D-57
                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
                                                         Query Match
Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                               SEQ ID NO 57
                                                                                                                                                                                                                                                                                                                                                                      Sequence 57, Application US/09433428D Patent No. 6149910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: I
SEQ ID NO 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 58, Application US/09433428D Patent No. 6149910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: PEPTIDES FOR THE DETEC
FILE REFERENCE: CDS-207
CURRENT EPPLICATION NUMBER: US/09/433,428D
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 70
                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS:
SOFTWARE: PatentIn Ve
                                                                                                                                                                                                                                                                    CURRENT FILING DATE: 1999-11-04
                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: FILE REFERENCE: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: De Leys, APPLICANT: Zheng, Ji
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 368
TYPE: PRT
ORCANISM: Artificial Sequence
                                                                                                                                                                                   LENGTH: 439
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                       240 ETLMQNQQRLNSWGCKGRIICYTSARWH 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               44
3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ETLMQNQQRLNSWGCKGRIICYTSARWH 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27;
                                                                                                                                                                                                                                           PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                CON: PEPTIDES FOR THE DETECTION CDS-207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ON: PEPTIDES FOR THE DETECTION CDS-207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90.8%;
96.4%;
                                                                                                                                                                                                                                                         1999-11-04
: 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Robert J.
                                                                      90.8%;
                                                                                                                                                                                                                                            2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 157; DB 4;
Pred. No. 8.5e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ٠,
                                                                        Score 157; DB 4
Pred. No. 1e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                            Mismatches
    267
                                                                                      4.
                                                            0;
                                                                                                                                                                                                                                                                                                                 QF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OF HIV-1 GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 368;
                                                                                     Length 439;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

RESULT 7 US-09-433-428D-62

```
ORGANISM: Artificial Sequence;
FEATURE:
NAME/KEY: Xaa is any amino acid;
LOCATION: 6
OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus;
OTHER INFORMATION: Sequence
US-09-433-428D-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 8
US-09-433-428D-64
; Sequence 64, Application US/09433428D
; Patent No. 6149910
; Patent No. 6149910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 62, Application US/09433428D Patent No. 6149910 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
APPLICANT: Zheng, Jian
APPLICANT: Zheng, Jian
APPLICANT: Zheng, Jian
TILE OF INVENTION: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP O
FILE REFERENCE: CDS-207
FILE REFERENCE: CDS-207
FILE REFERENCE: DATE: 1999-11-04
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEO ID NOS: 70
SOFTWARE: Patentin Ver. 2.0
SEO ID NO 62
LENGTH: 28
TYPE: PRT
                                                                                                                                                                                                                                                                                                                  NAME/KEY: Xaa is any amino acid
LOCATION: 13
OTHER INFORMATION: Description (
OTHER INFORMATION: Sequence
US-09-433-428D-64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 89.6 Best Local Similarity 96.4 Matches 27; Conservative
                                                                                        RESULT 9
US-09-433-428D-61
                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: CDS-207
CURRENT APPLICATION NUMBER: US/09/433,428D
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 70
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 64
LENGTH: 35
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
Sequence 61, Application US/09433428D Patent No. 6149910 GENERAL INFORMATION: APPLICANT: De Leys, Robert J. APPLICANT: Zheng, Jian
                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP
FILE REFERENCE: CDS-207
FILE REFERENCE: CDS-207
                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 w
                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                          Description of Artificial Sequence: HIV Consensus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       89.6%;
                                                                                                                                                                                                                                                      96.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       score 155; DB 4
pred. No. 1e-16;
                                                                                                                                                                                                                                                          Score 155; DB 4;
pred. No. 1.3e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 28
                                                                                                                                                                                                                                                                            Length 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
CURRENT APPLICATION NUMBER: US/09/433,428D
CURRENT FILING DATE: 1999-11-04
CURRENT FILING DATE: 1999-11-04
NUMBER OF SED ID NOS: 70
SOFTWARE: PATENTIN VET: 2.0
SEO ID NO 59
SEO ID NO 59
SEO ID NO 59
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus; OTHER INFORMATION: Sequence US-09-433-428D-61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
US-09-433-428D-59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: PEPTIDES FOR THE DETECTION INVESTIGATION APPLICATION NUMBER: US/09/433,428D CURRENT FILING DATE: 1999-11-04 NUMBER OF SEQ ID NOS: 70 SOFTWARE: PATENTIN VET. 2.0 SEQ ID NO 61 LENGTH: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
OTHER INFORMATION:
OTHER INFORMATION:
CONTROL OF THE CONT
                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 11
US-09-433-428D-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 59, Application US/09433428D Patent No. 6149910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE:
SOFTWARE: P.
SEQ ID NO 60
LENGTH: 23
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: PEPTIDES FOR THE DETECTION FILE REFERENCE: CDS-207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                       Sequence 60, Application US/09433428D Patent No. 6149910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: De Leys, Robert J. APPLICANT: Zheng, Jian
                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                          FILE REFERENCE: CDS-207
CURRENT APPLICATION NUMBER: US/09/433,428D
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 70
NUMBER OF SEQ ID NOS: 70
                                                                                                                                                                                                                                                                77.5%;
milarity 95.7%;
Conservative
                                                                                                     PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       76.9%;
milarity 95.7%;
Conservative
                                                                                                                                                                                                                                       CDS-207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PEPTIDES FOR THE DETECTION OF HIV-1 GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Description of Artificial Sequence:HIV Consensus Sequence
                                                                                                                                                                                                                                                                                                                                      Robert J
                                                                                                                                                                                                                                                                       PEPTIDES FOR THE DETECTION OF HIV-1 GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 134; DB 4;
Pred. No. 1.1e-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 133;
pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OF HIV-1 GROUP O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 23:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

В Qy

```
US-08<sup>2</sup>894-699-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 30
; LENGTH: 33
; TYPE: PRT
; ORGANISM: Human immunodeficiency virus type 1
US-09-433-428D-30
                                                                                                                                                                                                                                                                                                                              Sequence 36 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-433-428D-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Watches 22; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus; OTHER INFORMATION: Sequence
US-09-433-428D-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 30, Application US/09433428D Patent No. 6149910
           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/433,428D CURRENT FILING DATE: 1999-11-04 NUMBER OF SEQ ID NOS: 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 70 SOFTWARE: Patentin Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEPTIDES
                                                                                                                                                                                                APPLICANT: CHAIX-BAUDIER, MARIE-LAURE
TITLE OF INVENTION: GROUP O HIV-1, ERAGMENTS OF INVENTION: VIRUSES, AND USES THEREOF
                                                                                                                                                                                                                                       APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE:
                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                              NUMBER OF SEQUENCES:
   OPERATING SYSTEM:
                                                                                                                   STREET: 1755 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: Xaa is any amino acid LOCATION: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Artificial Sequence
                                                                          COUNTRY:
                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                    3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36, Application US/08894699
5. 6030769
                                                                22202
                                                                                                        ARLINGTON
                                                                                           ٧A
                                                                                                                       1755 SOUTH JEFFERSON DAVIS HIGHWAY, FOURTH
                                                                           USA
                                                                                                                                                                                                                                                    LOUSSERT-AJAKA, IBITISSAM
LY, THOAI-DUONG
                                                                                                                                                                                                                                                                             SARAGOSTI, SENTOB
                                                                                                                                                                                                                                                                                                   SIMON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                  OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             76.3%; Score 132; ilarity 100.0%; Pred. No. Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ON: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP O CDS-207
                                                                                                                                                                                                                                                                                               FRANCOIS
compatible
PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              75.7%; Score 131; DB 4; Length 33; 75.0%; Pred. No. 4.6e-13; rative 5; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                FRAGMENTS OF SUCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.2e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
```

В Q

```
US-09-444-410-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Watches 21; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TOPOLOGY: 1;; MOLECULE TYPE: US-08-894-699-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 36, Application US/09444410 Patent No. 6270975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                             CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                         COMPUTER READABLE FORM:
MEDLIUM TYPE: Floppy disk
COMPUTER: IBM COMPACTIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0.
                  PRIOR APPLICATION DATA:
                                                                                                                  SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 703-413-2220
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: PCT/FREETING DATE: 26-FEB-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 95/
FILING DATE: 27-FEB-1995
                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                               STREET: 1755 SOU
STREET: FLOOR
CITY: ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 40 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 03
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-413-3000
                                     FILING DATE
                                                                                                                                                                                                                      COUNTRY: UZIP: 22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                    ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, ADDRESSEE: P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11 ETLIQNQQLLNSWGCKGRIVCYTSVKWN 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: 703-413-2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: OBLON, NORMAN F
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/0 FILING DATE: 01-DEC-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                   ٧A
                                                                                                                                                                                                                                                                                    1755 SOUTH JEFFERSON DAVIS HIGHWAY, FOURTH
                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                            LY, THOAI-DUONG
CHAIX-BAUDIER, MARIE-LAURE
VENTION: GROUP O HIV-1, FRI
                                                                                                                                                                                                                                                                                                                                                                                                                               LOUSSERT-AJAKA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                SARAGOSTI, SENTOB
                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMON, FRANCOIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide
                                                                                                                                                                                                                                                                                                                                                                   VIRUSES, AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            75.7%;
75.0%;
FR 95/02236
                                               08/894,699
                                                                                                        US/09/444,410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FR 95/02236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT/FR96/00294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08/894,699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24,614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36:
                                                                                                                                                                                                                                                                                                                                                                                                                              IBITISSAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 131; DB 3;
Pred. No. 5.7e-13;
5; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0354-0020-0PCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

Gaps

0,

```
Sequence 23, Application US/09433428D

Patent No. 6149910

GENERAL INFORMATION:

APPLICANT: De Leys, Robert J.

APPLICANT: Zheng, Jian

TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP O

FILE REFERENCE: CDS-207

CURRENT APPLICATION NUMBER: US/09/433,428D

CURRENT FILING DATE: 1999-11-04

NUMBER OF SEQ ID NOS: 70

SOFTWARE: Patentin Ver. 2.0

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 23

LENGTH: 33

TYDE: PRT

ORGANISM: Human immunodeficiency virus type 1

US-09-433-428D-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: OBLOW, NORMAN F.

REGISTRATION NUMBER: 24,614
REFERENCE/DOCKET NUMBER: 0354-0020-0PCT
FELECOMMUNICATION INFORMATION:
TELEPHONE: 703-413-3000
TELEFAX: 703-413-2220
INFORMATION FOR SEQ ID NO: 36:
SEQUENCE CHARACTERISTICS:
LENGTH: 40 amino acids
TYPE: amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-09-444-410-36
                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
Search completed: June 20, 2002, 15:31:50 Job time: 218 sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-433-428D-23
                                                                                                                                                                             Query Match 75.1%;
Best Local Similarity 75.0%;
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 75.7%; Score 131; DB 4; Length 40; Best Local Similarity 75.0%; Pred. No. 5.7e-13; Matches 21; Conservative 5; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 27-FEB-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 130; DB 4; Length 33; Pred. No. 6.5e-13; 5; Mismatches 2; Indels
                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

THIS PAGE ALEMAN

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein - protein search, using sw model
                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                            Score
   173
173
166
166
157
157
   100.0
100.0
96.0
96.0
90.8
90.8
                                                                                                                                            Match
                                                                                                                                                                                                                                                                                                   18:
19:
20:
21:
22:
23:
24:
                                                                                                                                                          Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
11
12
13
14
15
16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  June 20, 2002, 15:30:32; Search time 105.35 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pending_Patents_AA_Main: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3502263 seqs, 351980561 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-605-573A-69
173
                                                                                                                                                                                                                                                                                          'Cgn2_6/ptodate/2/paa/US084_COMB.pep:*
(Cgn2_6/ptodate/2/paa/US085_COMB.pep:*
(Cgn2_6/ptodate/2/paa/US085_COMB.pep:*
(Cgn2_6/ptodate/2/paa/US086_COMB.pep:*
(Cgn2_6/ptodate/2/paa/US089_COMB.pep:*
(Cgn2_6/ptodate/2/paa/US089_COMB.pep:*
(Cgn2_6/ptodate/2/paa/US090_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 4.5
Copyright (c) 1993 - 2000 Comp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GRETLMQDQQRLNSWGCKGRIICYTSARWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cgn2_6/ptodata/2/paa/US06_COMB.pep:*
/cgn2_6/ptodata/2/paa/US07_COMB.pep:*
/cgn2_6/ptodata/2/paa/US080_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cgn2_6/ptodata/2/paa/US081_COMB.pep:*
/cgn2_6/ptodata/2/paa/US082_COMB.pep:*
/cgn2_6/ptodata/2/paa/US083_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /cgn2_6/ptodata/2/paa/PCTUS_COMB.pep:*
                                                                                                                                            Length
 30
30
30
149
149
220
                                                                                                                                            BB
   18
20
18
18
US-09-433-428-69
US-09-605-573A-69
US-09-433-428-63
US-09-605-573A-63
US-09-605-573A-63
US-09-605-573A-67
US-09-605-573A-67
                                                                                                                                          Ħ
                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.232 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3502263
                                                                                                                                      Description
                                                 Sequence
Sequence
Sequence
                Sequence
Sequence
 9442000
Appl
Appl
Appl
Appl
Appl
Appl
Appl
```

N	128	N	Ν	N	Ν	Ν	\sim	Ν	N	2	2	2	2	2	2	ω	w	w	w	ω	ω	ω	ω	ω	w	w	w	ω	5	5	5	S	S	5	S	5	ū
4	74.0		٠			٠.		٠.			٠.			٠.		<u>ب</u>	<u>ن</u>	5	ა	<u>ر</u>	<u>ن</u>	ŗ	რ			6	7.	.7	9	9	9	9	0	0	0	0	0
35	35	35	35	33	33	33	33	33	33	33	ω ω	ω G	ω	33	ω ω	113	ω w	33	32	32	33	ω	23	23	23	23	23	23	35	35	28	28	ω	ω	368	9	N
22	22	15	15	20	20	20	20	20	18	18	18	18	18	20	18	18	20	18	15	15	20	18	20	18	20	18	20	18	20	18	20	18	20	18	20	18	20
-09-886-150-6	US-09-886-149-62	-09-147-362A-	-09-147-362-2	-09-605-573A-1	-09-605-573A-	-09-605-573A-1	-09-605-573A-	-09-605-573A-	-09-433-428-1	-09-433-428-1	-09-433-428-1	-09-433-428-	-09-433-428-	-09-605-573A-	-09-433-428-2	-09-462-917A-	-09-605-573A-2	-09-433-428-	-09-147-362A-	-09-147-362-1	-09-605-573A-	-09-433-428-3	-09-605-573A-	-09-433-428-60	-09-605-573A-	-09-433-428-59	-09-605-573A-	-09-433-428-61	-09-605-573A-	-09-433-428-6	-09-605-573A-	-09-433-428-6	-09-605-573A-	-09-433-428-5	-09-605-573A	-09-433-428-58	-09-605-573A-
equence 6	uenc	equence 2	equence 2	equence 1	equence 1	equence 1	equence 9	equence	equence 1	equence 12	equence 1	equence 9	equence 2	equence 2	equence 2	equence 1	equence 2	equence	equence 1	equence 1	equence 3	equence 3	equence 6	equence 6	equence 5	equence 5	equence 6	equence 6	equence 6	equence 6	equence 6	equence 6	equence 5	equence 5	equence 5	equence 5	equence 6
Appl	Appl	Appl	Appl	Appl	App1	Appl	pp1	ppl	Appl	App	App	1dd	Appli	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	ס	Appl	₻	Appl	Appl	ס

ALIGNMENTS

```
CURRENT APPLICATION NUMBER: US/09/433,428
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 69
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 69
LENGTH: 30
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence
US-09-433-428-69
 В
                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-433-428-69
                                                                                                                                                                                                                                                                                                                                                            Sequence 69, Application US/09433428
GENERAL INFORMATION:
APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP O
FILE REFERENCE: CDS-207
                                                                   Query Match
Best Local S
Matches 30
 -
                1 GRETLMQDQQRLNSWGCKGRIICYTSARWH 30
GRETLMQDQQRLNSWGCKGRIICYTSARWH
                                                                 th 100.0%; Score 173; DB 1 Similarity 100.0%; Pred. No. 7e-17; 30; Conservative 0; Mismatches
                                                                                                   DB 18;
                                                                     0
                                                                                                   Length 30;
                                                                     Indels
                                                                                                                                                                                           HIV Consensus
                                                                     0
                                                                   Gaps
                                                                   0,
```

0;

```
US-09-433-428-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
US-09-605-573A-69
                                                                                                                                                 US-09-605-573A-63
                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                     US-09-433-428-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-605-573A-69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 69, Application US/09605573A
GENERAL INFORMATION:
APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/433,428
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 69
SOFTWARE: PATENTIN VEr. 2.0
SEQ ID NO 63
LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/605,573A CURRENT FILING DATE: 2000-06-28 NUMBER OF SEQ ID NOS: 70 SOFTWARE: Patentin Ver. 2.0 SEQ ID NO 69 LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 63, Application US/09433428 GENERAL INFORMATION:
                                                                    Sequence 63, Application US/09605573A
GENERAL INFORMATION:
APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
                                                                                                                                                                                                                                                                                                                          Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP
FILE REFERENCE: CDS-207
CURRENT APPLICATION NUMBER: US/09/605,573A CURRENT FILING DATE: 2000-06-28
                               TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF FILE REFERENCE: CDS-222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE: OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus OTHER INFORMATION: Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Description of Artificial Sequence: OTHER INFORMATION: Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                         Local Similarity hes 29; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GRETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                            1 GRETLMQXQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                   1 GRETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 173; DB 2 ilarity 100.0%; Pred. No. 7e-17; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS-222
                                                                                                                                                                                                                                                                                                                          96.0%;
96.7%;
                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                     Score 166; DB 18;
Pred. No. 6.9e-16;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                            DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                       HIV-1 GROUP
                                                                                                                                                                                                                                                                                                                                          Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HIV Consensus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
```

```
; FEATURE:
; NAME/KEY: Xaa is any amino acid
; LOCATION: 8
; OTHER INFORMATION: Description of
; OTHER INFORMATION: Sequence
US-09-605-573A-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus ; OTHER INFORMATION: Sequence US-09-433-428-67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                RESULT 6
US-09-605-573A-67
                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-433-428-67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                   Sequence 67, Application US/09605573A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 67, Application US/09433428 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 63
LENGTH: 30
                                                                                SEQ ID NO 67
LENGTH: 149
                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP
FILE REFERENCE: CDS-207
CURRENT APPLICATION NUMBER: US/09/433,428
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 69
NUMBER OF SEQ ID NOS: 69
SOFTWARE: Patentin Ver. 2.0
                                                                                                                             CURRENT APPLICATION NUMBER: US/09/605,573A CURRENT FILING DATE: 2000-06-28 NUMBER OF SEQ ID NOS: 70
                                                                                                                                                                                                                 APPLICANT: De Leys, Robert J. APPLICANT: Zheng, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS:
SOFTWARE: Patentin Ve
                                                                                                                 SOFTWARE:
                                                                                                                                                                                  TITLE OF INVENTION: PEP FILE REFERENCE: CDS-222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 149
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
FEATURE: OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus OTHER INFORMATION: Sequence
                                                TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                          90.88;
Local Similarity 96.48;
hes 27; Conservation
                                                                                                                                                                                                                                                                                                                                                     44
                                                                                                                                                                                                                                                                                                                                                  29;
                                                                                                                 PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                   PEPTIDES FOR THE DETECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96.0%;
96.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                     1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 157; DB 18;
Pred. No. 6.2e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 166;
Pred. No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Artificial Sequence: HIV Consensus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6.9e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     18;
                                                                                                                                                                                                     OF HIV-1 GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 149;
                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

```
US-09-433-428-66
Sequence 66, Application US/09433428
GENERAL INFORMATION:
APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PERFIDES FOR THE DETECTION OF HIV-1 GROUP OF FILE REFERENCE: CDS-207
 8
                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-605-573A-67
                                                                                                                              ; OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus; OTHER INFORMATION: Sequence US-09-605-573a-66
                                                                                                                                                                                                                                                                                                                                                                                                US-09-605-573A-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus ; OTHER INFORMATION: Sequence US-09-433-428-66
                                                                                                                                                                                                   APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP O
FILE REFERENCE: CDS-22
CURRENT APPLICATION NUMBER: US/09/605,573A
CURRENT FILING DATE: 2000-06-28
"NUMBER OF SED ID NOS: 70
SOFTWARE: Patentin Ver. 2.0
SED ID NO 66
LENCTH: 220
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                    Sequence 66, Application US/09605573A GENERAL INFORMATION:
APPLICANT: De Leys, Robert J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 66
LENGTH: 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/433,428
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                         ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         44
 44
                                                          Local Similarity
nes 27; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 96.4 es 27; Conservative
                             w
ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 90.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90.8%;
                                                                      90.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Score 157; DB
; Pred. No. 6.2e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 157; DB 10
                                                                      Score 157; DB 20
Pred. No. 9e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 20;
.2e-14;
                                                                                    DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                        0;
                                                                                    Length 220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 220;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                          0;
                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
; OTHER INFORMATION:
; OTHER INFORMATION:
US-09-605-573A-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-433-428-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-433-428-58
                                                                                                                               RESULT 11
US-09-433-428-57
                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-605-573A-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 58, Application US/09433428
GENERAL INFORMATION:
APPLICANT: De Leys, Robert J.
APPLICANT: Lheng, Jian
TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP O
FILE REFERENCE: CDS-207
                                                             Sequence 57, Application US/09433428
GENERAL INFORMATION:
APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 58
LENGTH: 368
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 58, Application US/09605573A
                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: PEPTIDES FOR THE DETECTION FILE REFERENCE: CDS-222 CURRENT APPLICATION NUMBER: US/09/605,573A CURRENT FILING DATE: 2000-06-28 NUMBER OF SEQ ID NOS: 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/433,428
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 69
TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP OF FILE REFERENCE: CDS-207 CURRENT APPLICATION NUMBER: US/09/433,428 CURRENT FILING DATE: 1999-11-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: De Leys, Rol
APPLICANT: Zheng, Jian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
OTHER INFORMATION: Descripti
                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                             Local Similarity
mes 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
mes 27; Conserv
                                                                                                                                                                                            3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09433428
                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                           Description of Artificial Sequence:HIV Consensus Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Robert J
                                                                                                                                                                                                                                                                              90.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 157; DB
Pred. No. 1.5e
1; Mismatches
                                                                                                                                                                                                                                                               1; Mismatches
                                                                                                                                                                                                                                                                              Score 157; DB 20;
Pred. No. 1.5e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of Artificial Sequence: HIV Consensus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 18;
1.5e-13;
hes 0;
                                                                                                                                                                                                                                                                                               20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OF HIV-1 GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 368;
                                                                                                                                                                                                                                                                                            Length 368;
                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
US-09-433-428-62
; Sequence 62, Application US/09433428
; GENERAL INFORMATION:
; APPLICANT: Do Leys, Robert J.
; APPLICANT: Zheng, Jian
; TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP O
; FILE REFERENCE: CDS-207
; FILE REFERENCE: CDS-207
US-09-433-428-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus ; OTHER INFORMATION: Sequence US-09-605-573a-57
                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-433-428-57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-605-573A-57
                                                                                                     CURRENT APPLICATION NUMBER: US/09/433,428
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 69
SOFTWARE: PATENTIN VET. 2.0
SEQ ID NO 62
LENGTH: 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/605,573A
CURRENT FILING DATE: 2000-06-28
NUMBER OF SEQ ID NOS: 70
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 57
LENGTH: 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 57, Application US/09605573A
GENERAL INFORMATION:
APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEPTIDES FOR TH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 90.8%;
Best Local Similarity 96.4%;
Matches 27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 69
SOFTWARE: PatentIn Ver. 2
SEQ ID NO 57
LENGTH: 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE:
                                                                  TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Artificial Sequence
               OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus OTHER INFORMATION: Sequence
                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus OTHER INFORMATION: Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS-222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PEPTIDES FOR THE DETECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 157; DE
Pred. No. 1.8e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 157; DB
Pred. No. 1.8e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 18;
.8e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 20;
.8e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OF HIV-1 GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 439;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 439;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
밁
                              ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; NAME/KEY: Xaa is any amino ; LOCATION: 6
; OTHER INFORMATION: Descript: OTHER INFORMATION: Sequence US-09-605-573A-62
                                                                                                                                               US-09-433-428-64
                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-433-428-64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-605-573A-62
                                                                                                                                                                                                                            SEQ ID NO 64
LENGTH: 35
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 64, Application US/09433428 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 27; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 62, Application US/09605573A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 62
                                                                                               Query Match
                                                                                                                                                                                                                                                                      APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEPTIDES FOR THE DETECTION
FILE REFERENCE: CDS-207
CURRENT FILING DATE: 1999-11-04
NUMBER OF SEQ ID NOS: 69
NUMBER OF SEQ ID NOS: 69
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: PEPTIDES FOR THE DETECTION OF HIV-1 GROUP FILE REFERENCE: CDS-222 CURRENT APPLICATION NUMBER: US/09/605,573A CURRENT FILING DATE: 2000-06-28 NUMBER OF SEQ ID NOS: 70 SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: De Leys, Robert J.
APPLICANT: Zheng, Jian
TITLE OF INVENTION: PEPTIDES
                                                                                                                                                              OTHER INFORMATION: Description of Artificial Sequence:HIV Consensus OTHER INFORMATION: Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 28
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                              ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      œ
                               ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ETLMQXQQRLNSWGCKGRIICYTSARWH 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                               ch 89.6%;
Similarity 96.4%;
27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      l Similarity
27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xaa is any amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Description of Artificial Sequence: HIV Consensus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     89.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     89'.6%;
                                                               Score 155; DE Pred. No. 3e-10; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 155; DB 20;
Pred. No. 2.4e-14;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 155; DB 18;
Pred. No. 2.4e-14;
0; Mismatches 1
                                                                                3e-14;
                                                                                               DB 18;
                                                                                                                                                                                                                                                                                                                                                            OF HIV-1 GROUP
                                                                                               Length 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                 Indels
                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
```

Search completed: June 20, 2002, 15:34:04 Job time: 212 sec

THIS PAGE BLANK (USPTO)

Run

```
OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
 pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
                                                                                                                                                                                                                       55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pending_Patents_AA_New:*

1: /cgn2_6/ptodata/1/paa/PCT_NEW_COMB.pep:*

2: /cgn2_6/ptodata/1/paa/US06_NEW_COMB.pep:*

3: /cgn2_6/ptodata/1/paa/US07_NEW_COMB.pep:*

4: /cgn2_6/ptodata/1/paa/US08_NEW_COMB.pep:*

5: /cgn2_6/ptodata/1/paa/US08_NEW_COMB.pep:*

6: /cgn2_6/ptodata/1/paa/US08_NEW_COMB.pep:*

7: /cgn2_6/ptodata/1/paa/US08_NEW_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
Gapop 10.0 , Gapext 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             June 20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-605-573A-69
173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       265615 seqs, 87701152 residues
   49.1
49.1
49.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match 100%
first 45 su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2002, 15:31:32; Search time 14.82 Seconds
(without alignments)
177.533 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BG
US-09-914-205-2
US-09-913-159x-2
US-09-913-159x-2
US-09-913-159x-2
US-09-915-5-24
US-09-95-6-188B-19
US-08-776-188B-36
US-08-776-188B-36
US-08-776-188B-36
US-08-776-188B-36
US-08-776-188B-36
US-08-776-188B-38
US-08-776-188B-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
 Sequence 2, Appli
Sequence 23, Appl
Sequence 24, Appl
Sequence 24, Appl
Sequence 8, Appli
Sequence 8, Appli
Sequence 19, Appl
Sequence 20, Appl
Sequence 10, Appl
Sequence 11, Appl
Sequence 14, Appl
Sequence 5, Appli
Sequence 6, Appli
Sequence 30, Appl
Sequence 30, Appl
Sequence 30, Appl
Sequence 50, Appli
Sequence 50, Appli
Sequence 53, Appli
Sequence 53, Appli
Sequence 50, Appli
Sequence 33, Appli
Sequence 33, Appli
Sequence 35, Appli
Sequence 35, Appli
Sequence 35, Appli
Sequence 35, Appli
Sequence 37, Appli
Sequence 37, Appli
Sequence 37, Appli
Sequence 38, Appli
Sequence 37, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-914-205-2
                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                     US-09-899-575-23
```

	45	44	43	42	41	40	39	38	37	36	ა 5	34	y y	32	31	30	29	28	2/	ì
	48	4.8	48	48	48	48	48	48	48	4.8	48	49	49	49	49	49	49	51	7.0	1
	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7		28.3		28.3	28.3	28.3	29.5		
	1064	1064	1006	1006	1006	1006	849	641	641	592	220	477	15	14	14	13	12	275	2/3	275
	6	o	6	6	σ	6	7	σ	6	7	6	S	υ	U	v	υ	σ	7	,	7
ALIGNMENTS	US-10-138-098-42	US-10-138-098-41	US-10-138-098-48	US-10-138-098-47	US-10-138-098-46	US-10-138-098-45	US-60-360-039-2688	US-10-138-098-39	US-10-138-098-38	US-60-360-039-22048	US-10-138-098-34	US-09-573-655B-1352	US-09-576-824A-111	US-09-701-432-9	US-09-576-824A-176	US-09-576-824A-177	US-09-576-824A-110	US-60-360-039-7357	000000000000000000000000000000000000000	0097-550-095-09-511
	sequence 42, Appr	sequence 41, Appr	40,		6	40	2000					Sequence 1352, Ap	111		, -		3 F	1 0		Sequence 4600, Ap

```
PRIOR APPLICATION NUMBER: 09/256,194
PRIOR FILING DATE: 1999-02-24
NUMBER OF SEQ ID NOS: 17
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 657
TYPE: PRT
ORGANISM: Human immunodeficiency virus type 1
US-09-914-205-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Application US/09914205
GENERAL INFORMATION:
APPLICANT: SIA, Charles D.Y.
APPLICANT: Cao, Shi-Xian
APPLICANT: Persson, Roy
APPLICANT: Rovinski, Benjamin
                                                                                                                                                                                                                                                                                                                               Sequence 23, Application US/09899575 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 49.1
Best Local Similarity 46.4
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Persson, Roy
APPLICANT: Rovinski, Benjamin
APPLICANT: ROVINSKI, Benjamin
TITLE OF INVENTION: EXPRESSING GP140 FRAGMENT OF PRIMARY HIV-1 ISOLATE
FILE REFERENCE: 1038-1176 MIS:jb
CURRENT APPLICATION NUMBER: US/09/914,205
CURRENT FILING DATE: 2002-04-09
CURRENT FILING DATE: 2002-04-09
                   APPLICANT: 2ur Megede, Jan
APPLICANT: Barnett, Susan W.
APPLICANT: Egnelbrecht, Susan W.
APPLICANT: Egnelbrecht, Susan
APPLICANT: van Rensburg, Estrelita Janse
APPLICANT: van Rensburg, Estrelita Janse
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP01631.102
CURRENT APPLICATION NUMBER: US/09/899,575
CURRENT APPLICATION NUMBER: 09/475,704
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR APPLICATION DATE: 1999-12-30
NUMBER OF SEQ. ID NOS: 135
SOFTWARE: PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     565 ERYLODORFLGMWGCSGKLICTTAVPWN 592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49.18;
46.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 85; L
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 5;
0.00033;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 657;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

SEQ ID NO 23 LENGTH: 849

```
; ORGANISM: Human immunodeficiency virus US-09-899-575-24
                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-899-575-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Envelope Polyproteir US-09-913-159A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-913-159A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; TYPE: PRT
; ORGANISM: Human immunodeficiency virus
US-09-899-575-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
 Query Match
Best Local Similarity
                                                                                                                                          SOFTWARE: P
SEQ ID NO 24
                                                                                                                                                                                                                                                                                                                                             Sequence 24. Application US/09899575
GENERAL INFORMATION:
APPLICANT: Zur Megede, Jan
APPLICANT: Barnett, Susan W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 46.4
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 2, Application US/09913159A GENERAL INFORMATION:
                                                                                                                                                                         CURRENT FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 135
                                                                                                                                                                                                                            APPLICANT: van Rensburg, Estrelita Janse
TITLE OF INVENTION: POLYNUCLECTIDES ENCODING ANTIGENIC
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USE
FILE REFERENCE: PP01631.102
CURRENT APPLICATION NUMBER: US/09/899,575
CURRENT FILING DATE: 2001-07-05
                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: Virus-Vaccine FILE REFERENCE: P057760 CURRENT APPLICATION NUMBER: US/09/913,159A CURRENT FILING DATE: 2002-03-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best
                                                                                                       TYPE: PRT
                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 199 07 485.2 PRIOR FILING DATE: 1999-02-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Strathmann AG & Co.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Human immunodeficiency virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    582 ERYLKDQQLLGIWGCSGKLICTTAVPWN 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             577 ERYLKDQQLLGIWGCSGKLICTTAVPWN 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
les 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30 | ::||| | | | | | | :: || | :: |:
                                                                                                                          855
                                                                                                                                                          PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                Egnelbrecht, Susan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
49.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          49.1%;
46.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   49.18;
                                                                                                                                                          2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 85; DB Pred. No. 0.00 6; Mismatches
Score 85;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 85; DB 5;
Pred. No. 0.00043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
DB 5;
0.00043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0.00043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5;
                                                                                                                                                                                                                                                                             AND USES
              Length 855;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 854;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
.
```

```
; OTHER INFORMATION:
; OTHER INFORMATION:
US-08-776-188B-8
                                                                                                                                         PRIOR APPLICATION NUMBER: PCT/EP95/02919
PRIOR FILING DATE: 1995-07-24
PRIOR APPLICATION NUMBER: P 44 30 972.4
PRIOR FILING DATE: 1994-08-31
PRIOR APPLICATION NUMBER: P 44 26 276.0
PRIOR FILING DATE: 1994-07-25
NUMBER OF SEQ ID NOS: 76
SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Human immunodeficiency virus US-10-130-157-363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                         SEQ ID NO 8
LENGTH: 15
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-130-157-363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 8, Applicat GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Ver. 2.1 SEQ ID NO 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 363, Application US/10130157 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/08/776,188B CURRENT FILING DATE: 2002-04-15
                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Weinhues, Ursula-Henrike
APPLICANT: Kruse-Muller, Cornelia
APPLICANT: Hoss, Eva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: DETERMINATION OF A SPECIFIC IMMUNOGLOBULIN USING MULTIPLE ANTIFILE REFERENCE: 100564-07003
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/130,157
CURRENT FILING DATE: 2002-05-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: The FILE REFERENCE: WAG-001
                                                      FEATURE:
                                                                     ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: DE 19955089.1 PRIOR FILING DATE: 1999-11-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: GENEART GmbH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGIH: 867
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           588 ERYLKDOOLLGIWGCSGKLICTTAVPWN 615
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  y Match 49.1%;
Local Similarity 46.4%;
hes 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ERYLKDQQLLGIWGCSGKLICTTTVPWN 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/08776188B
                                                                                                                                                                                                                                                                                                                                                                  Wiedmann, Michael
                                                                                                                                                                                                                                                                                                                                                                                       Seidel, Christoph
                                                                                                                                                                                                                                                                                                                                                                                                     Ofenloch-Hahnle, Beatus
                                                                                                                                                                                                                                                                                                                                                                                                                            Faatz, Elke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
               Description HIV subtype
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genome of the HIV-1 Inter-Subtype (C/B') and Use Thereof {\tt PCT}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 85; I
                 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                           Artificial Sequence: Epitope region of HIV I or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .00044;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 867;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

Query Match
Best Local Similarity
Matches 10; Conserv

Conservative

41.6%;

Score 72; DB 4; Pred. No. 0.00052; 4; Mismatches 1

Length 15;

Indels

0;

```
õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-776-188B-19
                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Xaa at US-08-776-188B-19
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 19,
                                                                                                                                                                                                                    US-08-776-188B-36
                                                                                                                                                                                                                                                                                                                                             веят Local t
Matches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn version 3.1 SEQ ID NO 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: PCT/EP95/02919
PRIOR FILING DATE: 1995-07-24
PRIOR APPLICATION NUMBER: P 44 30 972.4
PRIOR EILING DATE: 1994-08-31
PRIOR APPLICATION NUMBER: P 44 26 276.0
PRIOR FILING DATE: 1994-07-25
NUMBER OF SEC TO NOCE-76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: 100564-07003
CURRENT APPLICATION NUMBER: US/08/776,188B
CURRENT FILING DATE: 2002-04-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Weinhues, Ursula-Henrike APPLICANT: Kruse-Muller, Cornelia
                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                Sequence 36, Application US/08776188B GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Wiedmann, Michael
TITLE OF INVENTION: DETERMINATION OF A SPECIFIC IMMUNOGLOBULIN USING MULTIPLE ANTIGEN
                                                                                 APPLICANT:
APPLICANT:
                                                                                                                              APPLICANT: Weinhues, Ursula-Henrike APPLICANT: Kruse-Muller, Cornelia APPLICANT: Hoss, Eva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature
LOCATION: (3)..(3)
OTHER INFORMATION: Xaa at position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
OTHER INFORMATION: Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial Sequence
                                APPLICANT: Wiedmann, Michael TITLE OF INVENTION: DETERMINATION OF A SPECIFIC IMMUNOGLOBULIN USING MULTIPLE ANTIGEN FILE REFERENCE: 100564-07003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: Xaa at position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc_feature
CURRENT APPLICATION NUMBER: US/08/776,188B CURRENT FILING DATE: 2002-04-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION: (4)..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ENGTH:
                                                                                                                                                                                                                                                                                                                    12 LNSWGCKGRIICYTS 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LSLWGCKGKLVCYTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LNSWGCKGRIICYTS
                                                                                                                                                                                                                                                                                         G
                                                                                                                                                                                                                                                                                         LSLWGCKGKLVCYTS 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19
                                                                                                                                                                                                                                                                                                                                                        1 Similarity 66.
10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08776188B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hoss, Eva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seidel, Christoph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ofenloch-Hahnle, Beatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Faatz,
                                                                                                                   Faatz, Elke
                                                                                                    Ofenloch-Hahnle, Beatus
                                                                                    seidel, Christoph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Elke
                                                                                                                                                                                                                                                                                                                                                                          41.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             position 4 is
                                                                                                                                                                                                                                                                                                                                                                             Score 72;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of Artificial Sequence: SH-activated linear peptide
                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   żs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    is Beta-alanine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Epsilon-aminocaproic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Beta-alanine
                                                                                                                                                                                                                                                                                                                                                                                 DB 4;
0.00066;
                                                                                                                                                                                                                                                                                                                                                                                               Length 19
                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                        0
```

```
NAME/KEY: misc_feature; LOCATION: (4)...(4); OTHER INFORMATION: Xaa at position 4 is Beta-alanine US-08-776-188B-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn version 3.1
SEQ ID NO 36
LENGTH: 19
                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/576,824A
CURRENT FILING DATE: 2000-05-23
PRIOR APPLICATION NUMBER: 08/723,425
PRIOR FILING DATE: 1996-09-30
PRIOR APPLICATION NUMBER: 09/146,028
PRIOR APPLICATION NUMBER: 09/146,028
PRIOR APPLICATION NUMBER: PCT/EP93/00517
PRIOR FILING DATE: 1993-03-08
PRIOR FILING DATE: 1993-03-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-576-824A-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: PCT/EP95/02919
PRIOR FILING DATE: 1995-07-24
PRIOR APPLICATION NUMBER: P 44 30 972.4
PRIOR FILING DATE: 1994-08-31
PRIOR APPLICATION NUMBER: P 44 26 276.0
PRIOR FILING DATE: 1994-07-25
NUMBER OF SEQ ID NOS: 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: De Leys, Robei TITLE OF INVENTION: PROCE INVENTION: PROCE TITLE OF INVENTION: A PITTLE OF INVENTION: BIJOTTILE OF INVENTION: BIJOTTILE OF INVENTION: EPITTLE OF INVENTION: CONTINUE OF INVENTION: C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 10; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 20, Applica GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 19
TYPE: PRT
                                                                                                                                          PRIOR FILING DATE: 1992-03-06
NUMBER OF SEO ID NOS: 600
SOFTWARE: PATENTIN VET. 2.1
SEO ID NO 20
LENGTH: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc_feature LOCATION: (1)..(1) OTHER INFORMATION: Xaa at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Description OTHER INFORMATION: 9P41/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc_feature
LOCATION: (2)..(2)
OTHER_INFORMATION: XAA at position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature LOCATION: (3)..(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: Xaa at
                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: EP 92400598.6
ORGANISM: Human immunodeficiency virus FEATURE: NAME/KEY: VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12 LNSWGCKGRIICYTS 26
|: |||||:::||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 LSLWGCKGKLVCYTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/09576824A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ROBERT
PROCESS FOR THE DETERMINATION OF PEPTIDES CORRESPONDING PROCESS FOR THE DETERMINATION OF PEPTIDES AND THEIR USE IN TO IMMUNOLOGICALLY IMPORTANT EPITOPES OF A PROCESS FOR DETERMINATION OF ANTIBODIES OF BIOTINYLATED PEPTIDES CORRESPONDING TO IMMUNOLOGICALLY IMPORT BIOTINYLATED PEPTIDES FOR PREPARING THEM AND COMPOSITIONS FOR PREPARING THEM AND COMPOSITIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONTAINING THEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BIOTINYLATED PEPTIDES EPITOPES, A PROCESS FO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        41.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     position 1 is digoxigenin-3-cme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 72;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Artificial Sequence: Digoxigenin-labelled lines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ìs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Epsilon-aminocaproic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0.00066;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
RESULT 11
US-08-776-188B-54
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-776-188B-10
                                                                                                Sequence 54, Application US/08776188B
GENERAL INFORMATION:
APPLICANT: Weinhues, Ursula-Henrike
APPLICANT: Kruse-Muller, Cornelia
APPLICANT: Hoss, Eva
APPLICANT: Faatz, Elke
APPLICANT: Gfenloch-Hahnle, Beatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: modified US-09-576-824A-20
                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
        CURRENT
                        APPLICANT: Wiedmann, Michael
TITLE OF INVENTION: DETERMINATION OF A SPECIFIC IMMUNOGLOBULIN USING MULTIPLE ANTIGEN
                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Seidel, Christoph
APPLICANT: Wiedmann, Michael
TITLE OF INVENTION: DETERMINATION OF A SPECIFIC IMMUNOGLOBULIN USING MULTIPLE ANTIGEN
FILE REFERENCE: 100564-07003
CURRENT APPLICATION NUMBER: U$708/776,188B
CURRENT FILING DATE: 2002-04-15
PRIOR APPLICATION NUMBER: PCT/EP95/02919
PRIOR APPLICATION NUMBER: PCT/EP95/02919
PRIOR APPLICATION NUMBER: P. 44 30 972.4
PRIOR PILING DATE: 1994-08-31
PRIOR PILING DATE: 1994-08-31
PRIOR PILING DATE: 1994-08-31
PRIOR PILING DATE: 1994-07-25
PRIOR FILING DATE: 1994-07-25
PRIOR FILING DATE: 1994-07-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 76
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity Matches 12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Description of Artificial Sequence: Epitope region of HIV I or OTHER INFORMATION: HIV subtype 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Weinhues, Ursula-Henrike APPLICANT: Kruse-Muller, Cornelia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: (1)
OTHER INFORMATION: modified
NAME/KEY: VARIANT
LOCATION: (22)
                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity nes 11; Conserv
                                                                                                                                                                                                                                                                                                        9 QQRLNSWGCKGRIICYTSARW 29
| :||||| | :|:|:
| 1 QAQLNSWGCAFRQVCHTTVPW 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 MQDQQRLNSWGCKGRIIC 23
APPLICATION NUMBER: US/08/776,188B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LQDQARLNSWGCAFRQVC 21
                                                                           Ofenloch-Hahnle, Beatus
Seidel, Christoph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hoss, Eva
Faatz, Elk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ofenloch-Hahnle, Beatus
Seidel, Christoph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kruse-Muller, Cornelia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/08776188B
                                                                                                                                                                                                                                                                                                                                                                                      41.6%; Score 72; DB 4; larity 52.4%; Pred. No. 0.00094; Conservative 4; Mismatches 6
                      100564-07003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41.6%;
66.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 72; DB 5;
Pred. No. 0.00077,
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 5; Length 22
                                                                                                                                                                                                                                                                                                                                                                                                                  Length 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4; Indels
                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
```

```
RESULT 12
US-09-359-975-14
US-09-359-975-14; Application US/09359975; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-776-188B-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Pa
SEQ ID NO 54
LENGTH: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 41.6%;
Best Local Similarity 52.4%;
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT FILING DATE: 2002-04-15
PRIOR APPLICATION NUMBER: PCT/EP95/02919
PRIOR FILING DATE: 1995-07-24
PRIOR APPLICATION NUMBER: P 44 30 972.4
PRIOR FILING DATE: 1994-08-31
PRIOR APPLICATION NUMBER: P 44 26 276.0
PRIOR FILING DATE: 1994-07-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc_feature
LOCATION: (1)..(1)
OTHER INFORMATION: Xaa at position 1 is BPRU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE: FEATURE: OTHER INFORMATION: Description of Artificial Sequence: Ruthenylated linear peptid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25 mb-MD/JAF
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/359,975
FILING DATE: 23-Jul-1999
CLASSIFICATION: CUnknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5 QAQLNSWGCAFRQVCHTTVPW 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 19103
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9 QQRLNSWGCKGRIICYTSARW 29
                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Weiner, David B. Williams, William V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                     APPLICATION NUMBER: 08/029,336 FILING DATE: 11-MAR-1993
                                                       APPLICATION NUMBER: 08/093,235 FILING DATE: 15-JUL-1993
                                                                                               APPLICATION NUMBER: 08/125,012
FILING DATE: 21-SEP-1993
APPLICATION NUMBER: 08/124,962
FILING DATE: 21-SEP-1993
                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/979,385B
FILING DATE: 26 NOV-1997
APPLICATION NUMBER: US 08/495,684
FILING DATE: 28-SEP-1995
                                                                                                                                                                            APPLICATION NUMBER: PCT/US94/00899
FILING DATE: 26-JAN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Philadelphia
STATE: Pennsylvania
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Woodcock Washburn Kurtz Mackiewicz & Norris
STREET: One Liberty Place 46th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OF INVENTION: Compositions and Methods
Genetic Material
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bin
08/008,342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for Delivery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
```

```
RESULT 14
US-09-576-824A-6
                                                                                                               В
                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Description of Artificial Sequence: Epitope region of HIV I or ; OTHER INFORMATION: HIV subtype O US-08-776-1888-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-776-188B-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-359-975-14
Sequence 6, Application US/09576824A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 5, Application US/08776188B
                                                                                                                                                                                     Matches
                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1994-07-25
NUMBER OF SEQ ID NOS: 76
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/08/776,188B CURRENT FILING DATE: 2002-04-15 PRIOR APPLICATION NUMBER: PCT/EP95/02919 PRIOR FILING DATE: 1995-07-24 PRIOR APPLICATION NUMBER: P 44 30 972.4 PRIOR APPLICATION NUMBER: P 44 26 276.0 PRIOR APPLICATION NUMBER: P 44 26 276.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Wiedmann, Michael
TITLE OF INVENTION: DETERMINATION OF A SPECIFIC IMMUNOGLOBULIN USING MULTIPLE ANTIGEN
FILE REFERENCE: 100564-077003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: HOSS, EVA
APPLICANT: Faatz, El)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Weinhues, Ursula-Henrike APPLICANT: Kruse-Muller, Cornelia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Deluce, Mark
REGISTRATION NUMBER: 33,229
REFERENCE/DOCKET NUMBER: UPAP-0253
TELECOMMUNICATION INFORMATION:
TELEPHONE: 215-568-3100
TELEPASE: 215-568-3429
INFORMATION FOR SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                        ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Watch 40.5%;
Local Similarity 52.4%;
                                                                                                                                              12 LNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                     Local Similarity 47.4%;
                                                                                                           1 LGIWGCSGKLICTTAVPWN 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6 ERYIKDQQLLGIWGCSGKLIC 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 ETLMODOORLNSWGCKGRIIC 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Faatz, Elke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 26 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ofenloch-Hahnle, Beatus
Seidel, Christoph
                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DATE: 26-JAN-1993
                                                                                                                                                                                     4.
                                                                                                                                                                                                       Score 65; D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 70; [
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
0
                                                                                                                                                                                                                         DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 5;
                                                                                                                                                                                                       .008;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0018;
                                                                                                                                                                                                                       Length 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                     Indels
                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-776-188B-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-576-824A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 30, Application US/08776188E GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: De Leys, I
TITLE OF INVENTION:
                                                                                                                                SEQ ID NO 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                      PRIOR APPLICATION NUMBER: P 40 PRIOR FILING DATE: 1994-07-25 NUMBER OF SEQ ID NOS: 76
                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: PCT/EP95/02919
PRIOR FILING DATE: 1995-07-24
PRIOR APPLICATION NUMBER: P 44 30 972.4
PRIOR FILING DATE: 1994-08-31
                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/08/776,188B CURRENT FILING DATE: 2002-04-15
                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Wiedmann, Michael TITLE OF INVENTION: DETERMINATION OF A SPECIFIC IMMUNOGLOBULIN USING MULTIPLE ANTIFILE REFERENCE: 100564-07003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1996-09-30
PRIOR APPLICATION NUMBER: 09/146,028
PRIOR FILING DATE: 1993-11-22
PRIOR APPLICATION NUMBER: PCT/EP93/00517
PRIOR FILING DATE: 1993-03-08
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                        LENGTH: 20
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1992-03-06
NUMBER OF SEQ ID NOS: 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/576,824A CURRENT FILING DATE: 2000-05-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Weinhues, Ursula-Henrike
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: EP 92400598.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT FILING DATE: 2000-05-23 PRIOR APPLICATION NUMBER: 08/723,425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILE
FEATURE:
OTHER INFORMATION: Description
OTHER INFORMATION: gp41/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: modified site NAME/KEY: VARIANT LOCATION: (24) OTHER INFORMATION: modified site
                                                              ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Human immunodeficiency virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION: (1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 DQQLLGIWGCSGKHIT-TNVPWN 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 DOORLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE:
                                                                                                                                                    PatentIn version
                                                                                                                                                                                                                                                                                                                                                                                                                              Ofenloch-Hahnle, Beatus
Seidel, Christoph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hoss, Eva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kruse-Muller,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Elke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROCESS FOR THE DETERMINATION OF PEPTIDES CORRESPONDING PROCESS FOR THE DETERMINATION OF ANTIBODIES OF A PROCESS FOR DETERMINATION OF ANTIBODIES OF BIOTINYLATED PEPTIDES CORRESPONDING TO IMMUNOLOGICALLY EPITOPES, A PROCESS FOR PREPARING THEM AND COMPOSITIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              32.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONTAINING THEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cornelia
                                                                                                                                                                                                                  44 26 276.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 55.5; DB Pred. No. 0.19;
                        of Artificial Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ن
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 24;
                        Digoxigenin-labelled linea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IMMUNOLOGICALLY IMPORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1:
```

```
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(1)
; OTHER INFORMATION: Xaa at position 1 is digoxigenin-3-cme
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (2)..(2)
; OTHER INFORMATION: Xaa at position 2 is Beta-alanine
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (3)..(3)
; OTHER INFORMATION: Xaa at position 3 is Epsilon-aminocaproic acid
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (4)..(4)
; OTHER INFORMATION: Xaa at position 4 is Beta-alanine
us-08-776-188B-30

Query Match
; OTHER INFORMATION: Xaa at position 4 is Beta-alanine
us-08-776-188B-30

Query Match
; OTHER INFORMATION: Xaa at position 4 is Beta-alanine
us-08-776-188B-30

Query Match
; OTHER INFORMATION: Xaa at position 4 is Beta-alanine
us-08-776-188B-30

Query Match
; OTHER INFORMATION: Xaa at position 4 is Beta-alanine
us-08-776-188B-30

Query Match
; OTHER INFORMATION: Xaa at position 4 is Beta-alanine
us-08-776-188B-30

Query Match
; OTHER INFORMATION: Xaa at position 4 is Beta-alanine
us-08-776-188B-30

Query Match
; OTHER INFORMATION: Xaa at position 4 is Beta-alanine
us-08-776-188B-30

Query Match
; OTHER INFORMATION: Xaa at position 4 is Beta-alanine
us-08-776-188B-30

Query Match
; OTHER INFORMATION: Xaa at position 4 is Beta-alanine
us-08-776-188B-30

Query Match
; OTHER INFORMATION: Xaa at position 4 is Beta-alanine
us-08-776-188B-30

Query Match
; OTHER INFORMATION: Xaa at position 5; DB 4; Length 20;
Best LocaTion: (4)..(4)
; OTHER INFORMATION: Xaa at position 4 is Beta-alanine
us-08-776-188B-30

Query Match
; OTHER INFORMATION: Xaa at position 3 is Epsilon-aminocaproic acid
profite information
; OTHER INFORMATION: Xaa at position 3 is Epsilon-aminocaproic acid
profite information
; OTHER INFORMATION: Xaa at position 3 is Epsilon-aminocaproic acid
profite information
; OTHER INFORMATION: Xaa at position 3 is Epsilon-aminocaproic acid
```

env

env polyprotein polyprotein polyprotein ٠

Title: Perfect score: Sequence: Scoring table:

US-09-605-573A-69 173

BLOSUM62

Gapop 10.0 ,

Gapext 0.5

283138 seqs, 96089334

residues

protein -

protein search, using sw model

June 20,

2002,

env

Total number of Searched:

Maximum Minimum

DB seq

length: 0 length: 2000000000

Post-processing:

Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

PIR_71:*

pir1:*
pir2:*
pir3:*
pir4:*

Result No.

Score

Query

Length

DВ

H

SUMMARIES

S52930 A53034 S49197

Pred. score and is

18

VCLJG1
VCLJG2
VCLJG4
VCLJG90
S22000
S22000
S22000
S70417
VCLJST
S30453
S30453
S30455
S30455
S30455
S30455
S30456
S31994
S21994
S21999
S21999
S21999

0

Gaps

0

```
No. 1s the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 4.5 Copyright (c) 1993 - 2000 Comp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GRETLMQDQQRLNSWGCKGRIICYTSARWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15:28:32 ; Search time 14.82 Seconds
(without alignments)
194.513 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Compugen
envelope protein g
envelope protein g
envelope protein g
envelope protein g
envelope protein pr
env protein - huma
env protein g
envelope protein g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     env
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       env
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gp41 ENV protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               env polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            envelope protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rd
rd
d t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 1

S523930

C; Species: human immunodeficiency virus type 1 (fragment)

C; Species: human immunodeficiency virus type 1, HIV-1

C; Species: human immunodeficiency virus type 1, Change 26-Aug-1999

C; Date: 06-Jun-1995 #sequence_revision 21-Jul-1995 #text_change 26-Aug-1999

C; Chen, J.H. M.; Guetard, D.; Philbert, F.; Chamaret, S.; Tabary, T.; Montagnia

R; Cohen, J.H. M.; Guetard, D.; Philbert, F.; Chamaret, S.; Tabary, T.; Montagnia

R; Cohen, J.H. M.; Guetard, D.; Philbert, F.; Chamaret, S.; Tabary, T.; Montagnia

R; Species: A type 1, Montagnia

R; Status: preliminary

A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: genomic RNA
A; Residues: 1-104 <COH>
A; Cross-references: EMBL: X84328;
C; Superfamily: type E retrovirus
                                                                                                                                                                                                                                                                                                                                                 gag polyprotein - human immunodeficiency virus type 1 (strain Ant70)
C;Species: human immunodeficiency virus type 1, HIV-1
C;Species: human immunodeficiency virus type 1, HIV-1
C;Dete: 03-May-1994 #sequence_revision 03-May-1994 #text_change 07-May-1999
C;Decession: A53034
C;Decession: A53034
R;Vanden Haesevelde, M; Decourt, J.L.; De Leys, R.J.; Vanderborght, B.; van der Groe
J. Virol. 68, 1586-1596, 1994
A;Title: Genomic cloning and complete sequence analysis of a highly divergent African
A;Reference number: A53034; MUID:94149849
A;Accession: A53034; MUID:94149849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
                                                                                                                                                                                                            A;Molecule type: genomic RNA
A;Residues: 1-863 <VAN>
A;Cross references: GB:L02587
C;Superfamily: type E retrovirus
C;Keywords: polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                    A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 19
                                         Š
                                                                                           Query Match
Best Local S
Matches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                330
331
331
331
341
341
341
341
341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 ETLMODOORLNSWGCKGRIICYTSARWH
|||||:|| || || ||:|: ||||| :|:
| TETLMONOOLLNLWGCRGKAICYTSVOWN
                                               w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         l Similarity
19; Consert
                                                                                           ch 67.1%;
1 Similarity 60.7%;
17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B41621
VCLJBR
VCLJBA
VCLJA2
VCLJA3
VCLJYA
VCLJYA
VCLJYU
VCLJYU
VCLJYU
VCLJYU
VCLJYO
VC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NID:g695526; PIDN:CAA59066.1; PID:g695527
                                                                                                   ; Score 116; DB
; Pred. No. 1.7e
8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 118;
Pred. No. 1.
                                                                                                                                                                                                                                                      env
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                   polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
.2e-09;
                                                                                                                                  DB 2;
.7e-08;
                                                                                                                ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 104;
                                                                                                                                                               Length 863;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  envelope glycoprote
envelope polyprote
env protein - huma
env polyprotein pr
```

0

Gaps

0

Montagnier,

۲.

DЪ

ETLLQNQQLLSLWGCKGKLVCYTSVKWN 613

```
C;Date: 19-Mar-1997 #sequence_revision 24-Jul-1997 #text_change 26-Aug-1999
C;Accession: S49197
R;Charneau, P; Borman, A.M.; Quillent, C; Guetard, D.; Chamaret, S.; Cohen, J.; Remy, Submitted to the EMBL Data Library, July 1994
A;Reference number: S49197
A;Accession: S49197
A;Accession: S49197
A;Accession: S49197
A;Molecule type: DNA
A;Residues: 1-877 CCHA>
A;Cross-references: EMBL:X80020; NID:g510516; PIDN:CAA56323.1; PID:g510517
C;Keywords: glycoprotein; capsid protein
C;Keywords: glycoprotein; capsid protein; cost protein; capsid pro
                                                                                                                                                                                                                                            C; Superfamily: type E retrovirus env polyprotein C; Keywords: AIDS; capsid protein; coat protein; glycoprotein; F;1-30/Domain: signal sequence #status predicted <SIG>F;31-500/Product: coat protein gpl20 #status predicted <CP1>F;501-854/Product: coat protein gpl41 #status predicted <CP2>F;501-851/Domain: transmembrane #status predicted <TM2>F;605-693/Domain: transmembrane #status predicted <TM2>F;605-693/Domain: transmembrane #status predicted <TM3>F;134,140,143,154,158,186,195,239,260,267,274,299,331,336,351,
                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:X52154; NID:g58866; PIDN:CAA36407.1; PID:g58874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Species: simian immunodeficiency virus SIVcpz
A;Note: host Pan troglodytes (chimpanzee)
C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 16-Jul-1999
C;Accession: S09990
R;Huet, T; Cheynier, R; Meyerhans, A; Roelants, G; Wain-Hobson, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Gene: env
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-854 <HUE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Status: nucleic acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Title: Genetic organization of a chimpanzee lentivirus related A;Reference number: S09983; MUID:90259077
A;Accession: S09990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R:Huet, T.; Cheynier, R.; Meyerhans, A.; Roelants, Nature 345, 356-359, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N;Alternate names: coat polyprotein N;Contains: coat protein 9p120; coat protein 9p41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   env polyprotein precursor - simian immunodeficiency virus SIVcpz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  envelope protein precursor - human immunodeficiency virus type 1 (fragment)
C;Species: human immunodeficiency virus type 1, HIV-1
C;Date: 19-Mar-1997 #sequence_revision 24-Jul-1997 #text_change 26-Aug-1999
C;Accession: S49197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           599
                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
ETLMQDQQRLNSWGCKGRIICYTSARWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ETFIQNQQLLNLWGCKNRLICYTSVKWN
                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 64.3
18; Conservative
                                                                                                         Conservative
                                                                                                                                   53.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      not shown; translation not shown
                                                                                           Score 93; DB
Pred. No. 3.2e
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 3.365; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 114;
Pred. No. 3
                                30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         626
                                                                                           DB 1; Le
3.2e-05;
hes 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 2;
.3e-08;
les 5;
                                                                                                                                                                                                                                         <TM3>
,331,336,351,356,384,392,426,432,446,45
                                                                                                                                                         Length 854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 877;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immunodeficiency; polyprot
                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                to HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
```

```
C;Superfamily: type E retrovirus env polyprotein
C;Reywords: AIDS; capsid protein; coat protein; glycoprotein; immunodeficiency; polyp
F;l=17/Domain: signal seguence #status predicted <SIG>
F;l=858/Product: env polyprotein #status predicted <MAT>
F;l=858/Product: exterior membrane glycoprotein #status predicted <EXT>
F;502-858/Product: transmembrane glycoprotein #status predicted <FXT>
F;502-858/Product: transmembrane glycoprotein #status predicted <FXT>
F;504,67,76,119,120,151,166,179,192,193,196,206,238,241,248,272,278,289,300,367,371,40
            B
                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      env polyprotein precursor - human immunodeficiency virus type 2 (isolate ROD) N;Alternate names: coat polyprotein C;Species: human immunodeficiency virus type 2, HIV-2 C;Date: 30-Sep-1987 #sequence_revision 30-Sep-1987 #text_change 16-Jul-1999 C;Accession: C26262
                                                                                                                                                                                                                                                                                                                                                                                                 A; Gene: env
                                                                                                                                                                                                                                                                                                                                                                                                                   A; Cross-references: GB:M15390; NID:g1332361; PIDN:AAB00770.1; PID:g325749
                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-858 <GUY>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Contents: proviral DNA
A; Accession: C26262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Title: Genome organization and transactivation of the A; Reference number: A20262; MUID:87173056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R; Guyader, M.; Emerman, M.; Sonigo, Nature 326, 662-669, 1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                      Matches
                                                                                                                                                Query Match
          583
                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 574 ERYLQDQQILGLWGCSGKAVCYTTVPWN
                                         3 ETLMODOORLNSWGCKGRIICYTSARW 29
EKYLODQARLNSWGCAFRQVCHTTVPW 609
                                                                                                    Similarity
15; Conserv
                                                                                                 Conservative
                                                                                                                      53.2%;
                                                                                                                   Score 92;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P.; Clavel, F.; Montagnier,
                                                                                               Mismatches
                                                                               DB 1,
4.4e-05;
8;
                                                                                                                                     Length 858
                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immuno-deficiency virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    L.; Alizon, M.
                                                                                    0;
                                                                               Gaps
                                                                               0,
```

```
B
                                             Qy
                                                                                                                                                                    A;Gene: env
C;Superfamily: type E retrovirus (
C;Keywords: AIDS; capsid protein;
                                                                                                                                                                                                                                                                                                R;Fukasawa, M.; Miura, T.; Hasegawa, A.; Morikawa, S.; Tsujimoto, H.; Miki, K.; Kitam Nature 333, 457-461, 1988
A;Title: Sequence of simian immunodeficiency virus from African green monkey, a new m A;Reference number: A30045; MUID:88232906
A;Accession: G30045
                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-864 < FUK>
                                                                                                                                                                                                                                                                                                                                                                                                    C:Species: simian immunodeficiency viru
C:Date: 30-Jun-1989 #sequence_revision
C:Accession: 30045
                                                                                                                                                                                                                                              C; Genetics
                                                                                                                                                                                                                                                         A; Cross-references: EMBL: X07805
                                                                                                                                                                                                                                                                                                                                                                                                               env polyprotein - simian immunodeficiency virus (African green monkey isolate)
C;Species: simian immunodeficiency virus, SIV
C;Date: 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change 24-Oct-1997
                                                                                                        Query Match
Best Local
                                                                                      Matches
            809
                                       3 ETLMQDQQRLNSWGCKGRIICYTSARW 29
EKYLEDQARLNSWGCAWKQVCHTTVEW 634
                                                                              Similarity 48.1
13; Conservative
                                                                                                51.4%;
48.1%;
                                                                                                                                                                          env polyprotein
; coat protein;
                                                                                                Score 89;
Pred. No.
                                                                            Mismatches
                                                                     טB
ט.00012;
8;
                                                                                                                                                                    immunodeficiency;
                                                                                                               Length 864
                                                                          Indels
                                                                        0;
                                                                                                                                                                  polyprotein; transm
                                                                     Gaps
                                                                     0;
```

ď

envelope protein gp120/gp41 - human immunodeficiency virus type C;Species: human immunodeficiency virus type 1, HIV-1 A;Variety: isolate 20

RESULT S21990

į

```
envelope protein gp120/gp41 - human immunodeficiency virus type 1
C:Species: human immunodeficiency virus type 1, HIV-1
A; Variety: isolate 3L
C:Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 01-1
C:Accession: S22002; S70418
R:Steuler, H.; Storch-Hagenlocher, B.; Wildemann, B.; Hacke, W.
submitted to the EMBL Data Library, July 1991
A;Description: Distinct populations of HIV-1 in blood and cerebrosp.
A;Reference number: S21990
A;Accession: S22002
A;Molecule type: DNA
A;Residues: 1-358 <STEIL
A;Cross-references: EMBL:X61352; NID:g60186; PIDN:CAA43616.1; PID:g/
R;Steuler, H.; Storch-Hagenlocher, B.; Wildemann, B.
                                                                                                                              RESULT
S22000
                               envelope protein gp120/gp41 - human immunodeficiency virus type 1
c:Species: human immunodeficiency virus type 1, HIV-1
c:Date: 20-reb-1995 #sequence_revision 20-Feb-1995 #text_change 12-Apr-1995
c:Accession: $22000
                                                                                                                                                                                                                                                                                                                                                                                                                A:Status: preliminary
A:Molecule type: DNA
A:Molecule type: DNA
A:Residues: 1-333', X', 335-358 <STE2>
A:Cross-references: EMBL:x61352; NID:g60186
C:Superfamily: type E retrovirus env polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Date: 20-Feb-1995 #sequence_revisi
C;Accession: S21990; S70423
R;Steuler, H; Storch-Hagenlocher, B
submitted to the EMBL Data Library,
A;Description: Distinct populations
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Reference number: A; Accession: $70418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R:Steuler, H.; Storch-Hagenlocher, B.; Wildemann, B.
AIDS Res. Hum. Retroviruses 8, 53-59, 1992
A;Tille: Distinct populations of human immunodeficiency virus type 1 in blood
A;Reference number: S70417; MUID:92144209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Molecule type: DNA
A;Residues: 1-332,'X',334-357 <STE2>
A;Cross-references: EMBL:X61357; NID:g60175; PIDN:CAA43626.1; PID:g60176
C;Superfamily: type E retrovirus env polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R:Steuler, H.; Storch-Hagenlocher, B.; Wildemann, B.
AIDS Res. Hum. Retroviruses 8, 53-59, 1992
A;Title: Distinct populations of human immunodeficiency A;Reference number: S70417; MUID:92144209
A;Accession: S70423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-357 <STE1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: EMBL:X61357; NID:g60175; PIDN:CAA43626.1; PID:g60176 R;Steuler, H.; Storch-Hagenlocher, B.; Wildemann, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A: Reference number: A: Accession: S21990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary
                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 14
                                                                                                                                                                                                                       98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85
                                                                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                     ERYLKDQQLLGIWGCSGRLICTTAVPWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ERYLKDQQLLGIWGCSGRLICTTAVPWN 112
                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Storch-Hagenlocher, B.; Wildemann, B.; Hacke, W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inct populations
S21990
                                                                                                                                                                                                                                                                                                                                  50.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50.9%;
                                                                                                                                                                                                                                                                                                          Score 88; DB
Pred. No. 7.2e
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 88;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          July 1991
of HIV-1 in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PIDN:CAA43616.1; PID:g6018:
mann, B.
                                                                                                                                                                                                                                                                                                       .2e-05;
9;
                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .2e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          plood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                      Length 358;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cerebrospinal fluid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cerebrospinal fluid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    type 1 in blood and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-Dec-2000
                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           determ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        determ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cereb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cereb
F;1-19/Domain: signal sequence #status predicted <SIG> F;20-859/Product: env polyprotein #status predicted <ENV> F;20-501/Product: surface glycoprotein gpl20 #status predicted <ENV>
                                                                                            C; Superfamily: type E retrovirus env polyprotein C; Keywords: coat protein; glycoprotein; polyprot
                                                                                                                                                                                                                                                       A;Title: Molecular characterization of an A;Reference number: A33943; MUID:90112662 A;Accession: H33943
```

A; Molecule type: genomic RNA A; Residues: 1-859 <KUM>

attenuated

human immunodeficiency virus typ

C; Genetics:

A; Cross-references:

EMBL: M86924

predicted

<SGG>

transmembrane protein

A; Gene:

```
C;Date: 31-Dec-1990 #sequence_revision 31-Dec-1990 #text_change 09-Sep-1994 C;Accession: H33943 R;Kumar, P.; Hui, H.; Kappes, J.C.; Haggarty, B.S.; Hoxie, J.A.; Arya, S.K.; J. Virol. 64, 890-901, 1990
                                                                              N; Contains: surface glycoprotein gp120; C; Species: human immunodeficiency virus
                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-358 <STE>
A; Cross-references: EMB
C; Superfamily: type E r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         envelope protein gpl20/gp41 - human immunodeficiency virus type 1 (patient 3B) (fragm c;Species: human immunodeficiency virus type 1, HIV-1 A;Variety: patient 3B c;Date: 19-Mar-1997 #sequence_revision 25-Apr-1997 #text_change 26-Aug-1999 c;Stacession: S70417
                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references:
C;Superfamily: type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Steuler, H.; Storch-Ha
submitted to the EMBL Da
A;Description: Distinct
                                                                A; Note: host Homo sapiens (man)
                                                                                                                  N; Alternate names: coat polyprotein
                                                                                                                              env polyprotein precursor - human immunodeficiency virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-358 <STE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Reference number: A; Accession: S22000
                                                                                                                                                                                                                                                                                                                                                                                                                           A; Status: preliminary
                                                                                                                                                                                                                                                                                             Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 14; Conser
                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                  86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98
                                                                                                                                                                  11
                                                                                                                                                                                                                                                w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                               ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                ERYLKDQQLLGIWGCSGRLICTTXVPWN 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ERYLKDQQLLGIWGCSGRLICTTXVPWN 113
                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nces: EMBL:X61351
type E retrovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Storch-Hagenlocher, B.; Wildemann, he EMBL Data Library, July 1991
Distinct populations of HIV-1 in bl
                                                                                                                                                                                                                                                                                                                                                              type E retrovirus
                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nct populations
S21990
                                                                                                                                                                                                                                                                                               50.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50.3%;
                                                                                                                                                                                                                                                                                                                                                            NID:g60184; PIDN:CAA43614.1; PID:g60185 env polyprotein
                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                             Score 87;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      env polyprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 87; DB 2; Pred. No. 0.0001;
                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                              transmembrane glycoprotein gp41 type 2, HIV-2
                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                             DB 2;
0.0001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in blood and cerebrospinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В.;
                                                                                                                                                                                                                                                                                 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hacke,
                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             virus
                                                                                                                              type 2 (isolate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           type
                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 in blood and
                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fluid as
               Shaw,
                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dete
```

```
A;Cross-references: EMBL:M87071

A;Experimental source: FOENVA3

R;Gao, F.; Yue, L.; White, A.T.; Pappas, P.G.; Barchue, J.; Hanson, A.P.; Gre submitted to the EMBL Data Library, December 1992

A;Description: Human infection by genetically diverse SIVSM-related HIV-2 in A;Reference number: S30460

A;Accession: S30480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               F;506-859/Product: transmembrane glycoprotein gp41 #status predicted <TGG>F;507-523/Region: hydrophobic F;607-523/Repion: hydrophobic F;675-694/Pommain: transmembrane #status predicted <TMN>F;36,69,78,113,119,131,137,145,160,173,186,200,232,235,242,266,272,283,294,304,359,392,
              RESULT
S30453
                                                                                                                                                                                                                                                                                                                                                                A;Gene: env
C;Superfamily: type E retrovirus env polyprotein
C;Keywords: coat protein; glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: nucleic acid
A; Residues: 1-151 <GAW>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Title: Human infection by genetically diverse STV(SM)-related HTV-2 in West Africa. A;Reference number: S30448; MUID:92350299
A;Accession: S30448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Gao,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Cross-references: EMBL:M87069
A; Experimental source: FOENVAl3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Gao, F.; Yue, L.; White, A.T.; Pappas, P.G.; Nature 358, 495-499, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            env protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                          밁
                                                                                                                                                                                                                            ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Status: preliminary; translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Accession: S30449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type:
R;Gao, F.; Yue, L.;
Nature 358, 495-499,
                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Cross-references: EMBL: M87076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: nucleic acid
A; Residues: 1-151 <GA3>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Residues: 1-151 <GAO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;Cross-references: EMBL:M87085;Accession: S30481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;Molecule type: nucleic acid
;Residues: 1-151 <GA2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Species: human immunodeficiency virus type 2, HIV-2; Date: 02-Dec-1993 #sequence_revision 30-Jan-1998 #text_change 17-Mar-1999; Datesion: S30448; S30449; S30480; S30481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;Status: preliminary
                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            577 EKYLKDQAQLNSWGCASRQVCHTTVPW 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
mes 13; Conserv
                                                                                                                                                                                            28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 ETLMQDQQRLNSWGCKGRIICYTSARW
                                                                                                                                  13
                                                                                                                                                                                                                                  ω
                                                                                                                                                                                                                                ETLMQDQQRLNSWGCKGRIICYTSARW 29
                                                                                                                                                                                            EKYLKDQAQLNSWGCAFRQVCHTTVEW
                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human immunodeficiency virus type 2 (fragment) man immunodeficiency virus type 2, HIV-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
  White, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50.3%;
                                                                                                                                                                                                                                                                                        49.7%;
48.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 87; DB 1;
Pred. No. 0.00023;
                                                                                                                                                                                                                                                                                        Score 86; I
Pred. No. 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              shown
                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                          2e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Barchue, J.; Hanson, A.P.; Greene,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 859
                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                          Length 151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                      Hanson, A.P.; Greene,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Greene,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              west Africa
                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В.м.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В.M.;
                      В.М.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
```

```
env protein - human immunodeficiency virus type 2 (fragment) C;Species: human immunodeficiency virus type 2, HIV-2 C;Date: 02-Dec-1993 #sequence_revision 30-Jan-1998 #text_cha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
S30452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Superfamily: type E retrovirus env polyprotein
C;Keywords: coat protein; glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: translation not shown
A;Molecule type: nucleic acid
A;Residues: 1-151 <GAO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Gao, F.; Yue, L.; White, A.T.; Pappas, P.G.; Barchue, J.; Hanson, A.P.; Greene, Nature 358, 495-499, 1992
A;Title: Human infection by genetically diverse SIV(SM)-related HIV-2 in West Afri A;Reference number: S30448; MUID:92350299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Title: Human infection by genetically diverse SIV(SM)-related HIV-2 in West Africa A; Reference number: S30448; MUID:92350299
A;Gene: env
C;Superfamily: type E retrovirus env polyprotein
C;Keywords: coat protein; glycoprotein
                                                                                                         A;Status: translation not shown A;Molecule type: nucleic acid A;Residues: 1-151 <GAO>
                                                                                                                                                                                                                                            R;Gao, F.; Yue, L.; White, A.T.; Pappas, P.G.; Barchue, Nature 358, 495-499, 1992
                                                                                                                                                                                                                                                                                     env protein - human immunodeficiency virus type 2 (fragment) C;Species: human immunodeficiency virus type 2, HIV-2 C;Date: 02-Dec-1993 #sequence_revision 30-Jan-1998 #text_chaC;Date: 02-Dec-1993 #sequence_revision 30-Jan-1998 #text_chaC;Accession: S30450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Superfamily: type E retrovirus env polyprotein
C;Keywords: coat protein; glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Cross-references: EMBL:M87075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A, Status: translation not shown A, Molecule type: nucleic acid A, Residues: 1-151 <GAO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; Accession: S30452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene: env
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Cross-references: EMBL:M87089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: S30453
                                                                C; Genetics:
                                                                                         A; Cross-references:
                                                                                                                                                                            A; Reference number: A; Accession: S30450
                                                                                                                                                                                                                                                                                                                                                                            S30450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Gene: env
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: S30452
                                                                                                                                                                                                                       A; Title: Human infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28 EKYLKDQAQLNSWGCAFRQVCHTTVEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 ETLMQDQQRLNSWGCKGRIICYTSARW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 ETLMQDQQRLNSWGCKGRIICYTSARW 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ::|| :||||| | :|:|: |
EKYLKDQAQLNSWGCAFRQVCHTTVEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                  s30448;
                                                                                           EMBL: M87072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               49.7%;
48.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49.7%;
48.1%;
                                                                                                                                                                                                  genetically diverse SIV(SM)-related
MUID:92350299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 86; DB 2;
Pred. No. 6.2e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 86; I
Pred. No. 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Į,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .2e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIV(SM)-related HIV-2 in West Africa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #text_change 17-Mar-1999
                                                                                                                                                                                                                                                                                                                 #text_change 17-Mar-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 151;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 151
                                                                                                                                                                                                                                                                       J.; Hanson, A.P.; Greene,
                                                                                                                                                                                                                              HIV-2 in West Africa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

			Search completed: June 20, 2002, 15:32:12 Job time: 220 sec	Ouery Match 49.7%; Score 86; DB 2; Length 151; Best Local Similarity 48.1%; Pred. No. 6.2e-05; Matches 13; Conservative 6; Mismatches 8; Indels 0; Gaps 0; QY 3 ETLMODOORLNSWGCKGRIICYTSARW 29 :: :
•				

THIS PAGE BLANK (USPTO,

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB :
Maximum DB :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Run on:
  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seq length: 0 seq length: 2000000000
  of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  June 20, 2002, 15:31:52; Search time 10.33 Seconds (without alignments) 112.448 Million cell updates/sec
 US-09-605-573A-69
173
1 GRETLMQDQQRLNSW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SwissProt_40:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          105224 seqs, 38719550 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GRETLMQDQQRLNSWGCKGRIICYTSARWH
  ВВ
ENV_SIVCZ
ENV_HV2KR
ENV_HV2KR
ENV_HV2VAI
ENV_HV1ZAI
ENV_HV1ZY
ENV_HV1SY
ENV_HV1SY
ENV_HV1SY
ENV_HV1SY
ENV_HV1SY
ENV_HV1SY
ENV_HV1SY
ENV_HV1AS
ENV_HV1AS
ENV_HV1AS
ENV_HV1AS
ENV_HV1AS
ENV_HV1AS
ENV_HV1BH
ENV_HV1SG
ENV_HV2BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                105224
P17281 chimpanzee
074126 human immun
P04577 human immun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                                                                                                                                                                                                                                                                                                                                                                                           simian immu
simian immu
              immun

                                                                                                                                                                                                                                                                                                                                                                immun
immun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 1
ENV_SIVCZ
ID ENV_SIVCZ
```

45	44	43	42	41	40	39	38	37	36	ဌ	34
81	81	82	82	83	83	83	84	84	84	84	84
46.8	46.8	47.4	47.4	48.0	48.0	48.0	48.6	48.6	48.6	48.6	48.6
768	380	881	863	856	848	846	885	877	859	859	859
1	<u>, , , , , , , , , , , , , , , , , , , </u>	1	_	_	ـــ	ja	ب	ш	ب	ب	ш
ENV_SIVA1	ENV_SIVM2	ENV_SIVMK	ENV_HV1Z8	ENV_HV1H3	ENV_HV1JR	ENV_HV1ND	ENV_SIVS4	ENV_SIVAG	ENV_HV2ST	ENV_HV2D2	ENV_HV2CA
P27757	P08810	P05884	P05882	P04624	P20871	P18799	P12492	P27977	P20872	P15831	P24105
		simian immu								human im	
			-	-	-3	-	=	=	3	3	=

ALIGNMENTS

•••																																																
	-EJ	F. F.		T T	1 7	1	FT	FT	FT	FT	FT	FT	FΤ	FT	FT.	Ŧ.	7 X	XX	DR	DR	DR	DR	DR	DR	٥.	റ	2 (38		. 0	0	c	C	o ;	1 7 7	RA	RX	RP	RN	200	SO	GN	DE	DE	J [) D.	AC	ij
	н	-∃ ⊦	-3 +	3 -	-	9 ⊢:	Н	Н	ч	Ŧ	7	H	÷	н	ӈ,	∃,	∃≆	E	æ	æ	Ż	Ż	æ	æ	Ż (ი ი		ט נ	n Co	Ö.	a	G	O.	O E	4 E	3 >	×	Ö	z:	< €	ν	Z	Ħ	E P	3 6	H	'n	7.3
	CARBOHYD	CARBOHYD	CARBOHYD	CARBOHYD	CARBOHID	CARBOHYD	CARBOHYD	CARBOHYD	CARBOHYD	CARBOHYD	CARBOHYD	TRANSMEM	TRANSMEM	TRANSMEM	CHAIN	CHAIN	SIGNAL.	oat	PF005			InterPro; I			EMBL; X5215		or send an email to			the European	between the	This SWISS-PROT entry is copyright.		-!- SIMILARITY: STRONG,	TO HOLD STREET STREET TO HOLD STREET	Huet T., Cheynier	MEDLINE=90259077;	UENCE	[1]	VIFUSES; RECIDIO VIFUSES;	Chimpanzee immunodeliciency virus	ENV.	glycoprotein (GP120);	Envelope polyprotein GP160	15-TIII - 1999	01-AUG-1990	P17281;	ENV_SIVCZ
	299														501		د	protein;		16; GP120;	IPR000777;	PR000328		. VCLJSI.	w	C	o email to	d this s	non-profit	n Bioinf	e Swiss	PROT ent		ITY: STE	326-320 (FROM N.A.		11733.	Immunode		n (GP120	lyprotei	(Rel.			STAN
	299																بر ۵	Polyprotein; Glycoprotein;	••); Env_GP41	2.	,	1:	**************************************		tatement	instit	Bioinformatics I	Swiss Institute of Bloinformatics	ry is copy		STRONG, WITH			PubMed=2188136				riciency v				18 Last se	Creat		STANDARD;
	N-LINKED	N-LINKED	N-I TAKED	N-LINKED	スーにLNグだし	N-LINKED	N-LINKED	N-LINKED	N-LINKED	N-LINKED	N-LINKED	POTENTIAL	POTENTIAL.	POTENTIAL.	TRANSMEMBRANE	SOLGELLAG		in; Glyco				•				000000000000000000000000000000000000000	agreement	is not removed.	ions as	Institute.	of Bioin	right. It		WITH HIV-1 EN	a cumpanzee		136;			Recroviridae;	irus (SI)		mbrane g	ecursor	sequence update	_		PRT;
٠	GLCNAC	GLCNAC.	GECNAC.	(GECNAC	(GLCNAC.	(GLCNAC	(GLCNAC	(GLCNAC	(GLCNAC	(GLCNAC	(GLCNAC				BRANE GLYCO	NISTOROUN IN SURGEMEN GOIGENAS		pprotein; Ti							•		đ	noved. Usage	as	There are		: is produced		ENV POLYPROTEIN	Tencivirus	Roelants G.,				e; Lentivirus	a		-	precursor (Contains:)	undate)	•		854 AA.
	·) (POTE	CPOTE		· CPOTE	·) (POTE	·) (POTE	.) (POTE	.) (POTE	.) (POTE	.) (POTE	.) (POTE				GLYCOPROTEIN.	STOREOUS I		Transmembrane								1 1 1 1 1 1 1 1 1	//www.tsb	ge by a	conte	are no res				H.	related to	Wain-Hobson				us.	5		(GP41)].	Exterior membrane				
	POTENTIAL).	(POTENTIAL).	(FOIENTIAL).	TOTENTIAL).	POTENTIAL).	(POTENTIAL).	POTENTIAL).	POTENTIAL).	POTENTIAL).	POTENTIAL).	POTENTIAL).					H		ane;									יירנף://www.rap.arp.ci/amiounce/	and for commercial	is in no	restrictions on its	EMBL outstation -	through a collaboration			EO HIV"I.";	son S.;								membrane				

```
RRESULT 2
ENV_HYZER ID ENV_HYZER ID ENV_HYZER ID ENV_H ID IS-JU DI IS-JU DE ENVEL ID ENVEL ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENV_HV2KR
Q74126;
Q1-NOV-1997
 CARBOHYD
CARBOHYD
CARBOHYD
                                                                         CARBOHYD
CARBOHYD
                                                                                                           CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                           Signal.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                EMBL; U22047; AAA64582.1; InterPro; IPR000328; Env_GP41. InterPro; IPR000777; GP120.
                                                                                                                                                                                                                                                                                                                                                                                         use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kraus G.K., Talbott R., Leavitt M., Luznick L., Schmidt A., Badel P., Bartz C., Morton W., Wong-Staal F., Looney D.J.; Submitted (APR-1995) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
Envelope polyprotein GP160 precursor [Contains: Exterior membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Viruses; Retroid viruses; NCBI_TaxID=73484;
                                                                                                                                                                                        CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human immunodeficiency virus type 2 (isolate KR) (HIV-2) Viruses; Retroid viruses; Retroviridae; Lentivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           574 ERYLQDQQILGLWGCSGKAVCYTTVPWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                               Coat
                                                                                                                                                                                                                                                                               PF00516; GP120; PF00517; GP41; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                               protein;
   1
20
504
36
69
78
113
113
121
134
142
159
198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   331
336
351
351
351
392
392
426
426
432
601
601
601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GP120);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           331
356
356
356
384
392
426
426
432
446
450
601
601
608
618
618
   19
503
857
36
69
78
113
1121
1134
1142
1159
1186
                                                                                                                                                                                                                                                              Polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED (GLCNAC.
POTENTIAL.
EXTERIOR MEMBRA
TRANSMEMBRANE (GLCN.
N-LINKED (GLCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 93; DB 1;
Pred. No. 2.7e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                              Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        857
                                GLCNAC...
(GLCNAC...
(GLCNAC...
(GLCNAC...
(GLCNAC...
(GLCNAC...
(GLCNAC...
                                                                                                                                                                                                          MEMBRANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GLCNAC...
(GLCNAC...
(GLCNAC...
(GLCNAC...
                                                                                                                                                  (GLCNAC. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GLCNAC. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AΑ
                                                                                                                                                                                        GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9;
                                                                                                                                                                                                                                                               Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 854;
                                                                                                                                                                                                        GLYCOPROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GP41)].
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
                                                                                                                                                (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
```

```
ENV_HV2RO

ID ENV_HV2RO

AC P04577;

DT 13-AUG-1987 or 13-AUG-1987
       ALD DOT TITLE TO DESCRIPTION OF THE TEST O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 15
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                      AIDS; Co
Signal.
SIGNAL
CHAIN
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-AUG-1987 (Rel. 05, Created)
13-AUG-1987 (Rel. 05, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Envelope polyprotein GP160 precursor [Contains: Exterior membrane glycoprotein (GP120); Transmembrane glycoprotein (GP41)].
ENV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-87173056; PubMed-3031510; MEDLINE-87173056; PubMed-3031510; Finerman M., Sonigo P.,
                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; M15390; AAB00770.1;
EMBL; X05291; CAA28914.1;
PIR; C26262; VCLJG2.
HIV; M15390; ENV$2ROD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This
                                                                                                                                                                                                                                                                                                           Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Viruses; Retroid
NCBI_TaxID=11720;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CARBOHYD
                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000328; Env_GP41.
InterPro; IPR000777; GP120.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nature 326:662-669(1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Genome organization and tra
immunodeficiency virus type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alizon M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human immunodeficiency virus type 2 (isolate ROD) (HIV-2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ETLMQDQQRLNSWGCKGRIICYTSARW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EKYLRDQARLNSWGCAFRQVCYTTVLW
                                                                                                                                                                                                                                               Coat
                                                                                                                                                                                                                                                                               PF00516; GP120; : PF00517; GP41; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity 55.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  230
233
264
270
281
292
302
358
364
364
391
440
455
603
612
628
628
                                                                                                                                                                                                                                            protein; Polyprotein;
       18
502
34
67
76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   viruses; Retroviridae; Lentivirus
       17
501
858
34
67
76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     230
233
264
270
270
281
292
292
358
358
440
440
603
612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           transactivation of the human p = 2 \cdot r;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₹
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 93; DB .
Pred. No. 2.7e
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-LINKED (GLCNAC.
N-LINKED (GL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4;
EXTERIOR MEMBRANE GLYCOPROTEIN.
TRANSMEMBRANE GLYCOPROTEIN.
N-LINKED (GLCNAC. . .) (POTENTI
N-LINKED (GLCNAC. . .) (POTENTI
N-LINKED (GLCNAC. . .) (POTENTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                        Glycoprotein; Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clavel F., Montagnier
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D (GLCNAC...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1;
2.7e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 857;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL)
                                                                  (POTENTIAL)
                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
ENU_SIVAT

ENV_SIVAT

ID _SVAT

ID _SVAT

ID -NO
DT 01-NO
DT 16-OC
DE ENV_.

OS SIMIA
OC VILUS

AN NCBIL

RN 4[1]

RN 4EDLI

RR MEDLI

R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENV_SIVAT
P05886;
01-NOV-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1988 (Rel. 09, Created)
01-NOV-1988 (Rel. 09, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Envelope polyprotein GP160 precursor [Contains:
glycoprotein (GP120); Transmembrane glycoprotein
                                                        the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
MEDLINE-8823906; PubMed-3374586;
Fukasawa M., Miura T., Hasegawa A
Miki K., Kitamura T., Hayami M.;
                                                                                                                                                                                                                                                                                                                                                                                                                         Simian immunodeficiency virus (TYO-1 isolate) (SIV-AGM). Viruses; Retroid viruses; Retroviridae; Lentivirus.
                                                                                                                                                                                                                                                                                                                                                                                                    Viruses; Retroid
NCBI_TaxID=11731;
                                                                                                                                                                                                                   Sequence of simian immunodeficiency virus from African gre
new member of the HIV/SIV group.";
Nature 333:457-461(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       w
  ; X07805; CAA30663
G30045; VCLJG4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ETIMODOORLNSWGCKGRIICYTSARW 29
| :||| |||||| | :|:|: |
EKYLQDQARLNSWGCAFRQVCHTTVPW 609
                                                                                                                                                          SWISS-PROT entry is copyright. It is produced through a c
sen the Swiss Institute of Bioinformatics and the EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             l Similarity
15; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55
5
                                                                                                                                                                                                                                                                                                      Hasegawa A.,
Hayami M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 92; DB
Pred. No. 3.9e
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N-LINKED (GLCNAC.
T -> I (IN REF. 1;
C7266AF1F5C5B9A7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    r [Contains: Exterior membrane glycoprotein (GP41)].
                                                                                                                                                                                                                                                                                                                         Morikawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GLCNAC
(GLCNAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1;
3.9e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ξ
                                                                                                                                                                                                                                                                                                                         s:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB00770).
CRC64;
                                                                                                                                                                                                                                                                                                                         Tsujimoto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                            restrictions
                                                                                                                                                                                                                                                                                 green monkey
                                                                                       for st
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                collaboration -
                                                                               ch/announce/
                                                                                                                                                              outstation
                                                                                                                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                       n on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
RESULT 5
ENV_SIVAL
ID ENV_S
AC Q0283
AC Q0283
AC Q0283
AC Q0283
AC W0283
AC Q0283
AC V170
AC W170
AC W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 13
                                                                                                                               SEQUENCE FROM N.A.
MEDLINE-91220680; PubMed=2024476;
Fomsgaard A., Hirsch V.M., Allan J.
"A highly divergent proviral DNA cl
of African green monkey.";
Virology 182:397-402(1991).
-1- MISCELLANEOUS: THIS IS AN AFRIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENV_SIVAI
Q02837;
Q1-JUL-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AIDS; COB
Signal.
Signal
CHAIN
CHAIN
CHAIN
SITE
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                              01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Envelope polyprotein GP160 precursor [Contains: Envelope polyprotein (GP120); Transmembrane glycoprotein ENV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00516; GP120; Pfam; PF00517; GP41;
the European Bioinformatics Institute.
use by non-profit institutions as lemodified and this statement is not remo
                                                                                        This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
                                                                                                                                                                                                                                                                                                                                       Simian immunodeficiency virus (isolate AGM / clone GRI-1) (SIV-AGM) Viruses; Retroid viruses; Retroviridae; Lentivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000328; Env_GP41.
InterPro; IPR000777; GP120.
                                                                   between
                                                                                                                                                                                                                                                                                                                                  Viruses; Retroid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ETLMQDQQRLNSWGCKGRIICYTSARW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X07805; ENVSAGMTY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EKYLEDQARLNSWGCAWKQVCHTTVEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            l Similarity 48.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      51
48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₹,
                                                                                                                                    AN AFRICAN GREEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 89; DB Pred. No. 1.1e 6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGS XN 17 - N
CG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EXTERIOR MEMBRANE GLYCOPROTEIN TRANSMEMBRANE GLYCOPROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6CEF0F09001D6D95
                                                                                                                                                                                                     J.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Glycoprotein; Transmembrane;
                    long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GLCNAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GLCNAC...
                                                                                                                                                                                                     Johnson
of SIV f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GLCNAC.
                       ormatics and the EMBL outs
There are no restrictions
ong as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .1e-05;
                                                                                                                                    MONKEY ISOLATE.
                                                                                                                                                                                                       from
                                                                                                                                                                                                                            ס
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 865;
                                                                                                                                                                                                                                                                                                                                                                                                                               Exterior membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                        (GP41)]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                       <u>ب</u> و
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL)
                                                                                                                                                                                                       distinct
      and
    d for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                     collaboration -
                                                                                                                                                                                                     species
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                           2 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
RESULT (
                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 13; Conser
                                                                                                    V2Nz
V2Nz
ENV_HY2NZ
ENV_HY2NZ
D1-NOY-1988 (Rel. 09, Created)
01-NOY-1988 (Rel. 09, Last sequence update)
01-NOY-1988 (Rel. 09, Last annotation update)
15-UUL-1999 (Rel. 38, Last annotation update)
Envelope polyprotein GP160 precursor [Contains: Exterior membrane Envelope polyprotein (GP120); Transmembrane glycoprotein (GP41)].
SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

MEDLINE=88320359; PubMed=3261862;

Zagury J.F., Franchini G., Reitz M.S. Jr., Collalti E., Starcıcıı
Hall L., Fargnoli K., Jagodzinski L.L., Guo H.-G., Laure F.,
Hall L., Fargnoli K., Jagodzinski L.L., Good H.-G., Gallo R.C.;

Arya S.K., Josephs S.F., Zagury D., Wong-Staal F., Gallo R.C.;

Arya S.K., Josephs S.F., Zagury D., Wong-Staal F., Gallo R.C.;

The start of the variability among HIV type 1."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AIDS; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000328; Env_GP41.
InterPro; IPR000777; GP120.
Pfam; PF00516; GP120; 1
Pfam; PF00517; GP41; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or send an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entities requires
                                                                                                                                                                                                                                                                                 594
                                                                                                                                                                                                                                                                                                     ω
                                                                                                                                                                                                                                              σ
                                                                                                                                                                                                                                                                                EKYLEDQARLNSWGCAWKQVCHTTVPW 620
                                                                                                                                                                                                                                                                                              ETLMQDQQRLNSWGCKGRIICYTSARW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Coat protein; Polyprotein; Glycop
L 1 24 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       M58410;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                M66437; AAA91928.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       equires a license agreement (See http://www.isb-sib.ch/announce/email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA47591.1;
                                                                                                                                                                                                                                                                                                                                                                                  ΑĀ,
                                                                                                                                                                                                                                                                                                                                                                                             license
                                                                                                                                                                                                                                                                                                                                                                                  96855 MW;
                                                                                                                                                                                                                                                                                                                                       50
48
                                                                                                                                                                                                                                                                                                                                     38;
                                                                                                                                                                                                                                                                                                                                                                             N-LINKED (GLCNAC.
                                                                                                                                                                                                                                                                                                                           6
                                                                                                                                                                                                                                                                                                                                     Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TRANSMEMBRANE (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL)
                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                     29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Glycoprotein;
                                                                                                                                                                                                                                                                                                                                      87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GLCNAC...
(GLCNAC...
(GLCNAC...
(GLCNAC...
(GLCNAC...
(GLCNAC...
(GLCNAC...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                            (GLCNAC. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEMBRANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GLCNAC. .
                                                                                                                                                                                                                                                                                                                                      GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                 CRC64;
                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                854;
                                                              Starcich B
                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Signal.
                                                                                                                                                                                                                                                                                                                           Gaps
                                                                ₽.
                                                                                                                                                                                                                                                                                                                          0
```

멂 Ş

```
RESULT 7
ENV_HV2SB
   망
                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                  Service and the service and th
                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                           ENV_HV2SB STANDARD; PRT; (P12/449; O1-OCT-1989 (Rel. 12, Created) 01-OCT-1989 (Rel. 12, Last sequence upon 15-UUL-1999 (Rel. 38, Last annotation Envelope polyprotein GP160 precursor plycoprotein (GP120); Transmembrane glycoprotein (GP120);
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Signal
SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entities
or send a
Viruses; Retroid
NCBI_TaxID=11718;
             Human immunodeficiency virus type 2 (is Viruses; Retroid viruses; Retroviridae;
                                                 ENV
                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000328; Env_GP41.
InterPro; IPR000777; GP120.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; J03654; AAB00761
HIV; J03654; ENV$2NIHZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AIDS; Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Proc. Natl. Acad.
                                                                                                                                                                                                                                          574
                                                                                                                                                                                                                                                                         ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the EN European Bioinformatics Institute. There are no restructed by non-profit institutions as long as its content
                                                                                                                                                                                                                                                            ETLMQDQQRLNSWGCKGRIICYTSARW
                                                                                                                                                                                                                                          EKYLKDQAQLNSWGCAFRQVCHTSVPW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PF00516; GP120; PF00517; GP41;
                                                                                                                                                                                                                                                                                                   Similarity 51.9
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   requires
                                                                                                                                                                                                                                                                                                                                                                                  protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1
21
493
37
70
79
112
116
128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB00761.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                    98665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    license
                                                                                                                                                                                                                                                                                                                  50.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                    WW.
                                                                           sequence up annotation precursor [
                                                                                                                                                                                                                                                                                                     <u>ن</u>
                                                                                                                                                                                                                                                                                                     Score 87; DB Pred. No. 2.26 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    agreement
                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                              N-TINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRANSMEMBRANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EXTERIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85:5941-5945(1988).
                                                                                                                                                                                                                                                                                                                                                                                    A938B0A7E2B881D6
                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                         29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glycoprotein;
                               2 (isolate SBLISY)
                                                                           e update)
ion update)
or [Contains:
                                                              glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GLCNAC.
(GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                               (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                              (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEMBRANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GLCNAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             There are no rest
                                                                                                                                                                                                                                                                                                                    DB 1;
2.2e-05;
                Lentivirus
                                                                                                                                                           ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Usage
                                                                                                                                                                                                                                                                                                     ,,
                                                                                                                                                                                                                                                                                                                                    Length 856;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Transmembrane;
                                                                             Exterior membrane
                                                                                                                                                                                                                                                                                                                                                                                    CRC64;
                                                              (GP41)].
                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL)
(POTENTIAL)
(POTENTIAL)
(POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 уď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL). (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              restrictions
tent is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a collaboration -
MBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               outstation
                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in no way commercial
                                                                                                                                                                                                                                                                                                       0
```

```
RESULT 8
ENV_HV1ZH
ID ENV_H
AC P0588
DT 01-NO
DT 115-JU
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOLUTION OF THE STATE OF THE ST
                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 14; Conserv
     ENV_HV1ZH STAN
P05881;
01-NOV-1988 (Rel. (
01-NOV-1988 (Rel. (
01-NOV-1989 (Rel. (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             [1]
SEQUENCE FROM N.A.
MEDLINE-89184641; PubMed-2648404;
Franchini G., Fargnoli K.A., Giombini F.,
Bosch M., Biberfeld G., Fenyo A.M., Albert
Bosch M., Biberfeld G., Fenyo A.M., Albert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
CHAIN
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Signal.
Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00516; GP120;
Pfam; PF00517; GP41; 1
AIDS; Coat protein; Pc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; J04498; AAB00752.1; -.
HIV; J04498; ENV$21SV.
InterPro; IPR000328; Env_GP41.
InterPro; IPR000777; GP120.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human immunodeficiency type 2 (HIV-2) proviral clone.";
Proc. Natl. Acad. Sci. U.S.A. 86:2433-2437(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Molecular and biological characterization of a
                                                                                                                                                                                                                                                                575
                                                                                                                                                                                                                                                                                                              ω
                                                                                                                                                                                                                                                       EKYLADQARLNSWGCAFRQVCHTTVPW 601
                                                                                                                                                                                                                                                                                                           ETLMQDQQRLNSWGCKGRIICYTSARW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ξ
                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19
493
846
36
69
113
1132
1142
1157
1297
229
239
229
239
269
269
269
357
360
390
458
458
458
458
458
458
458
        . 09, Created)
. 09, Last sequ
. 38, Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Polyprotein; Glycoprotein; Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                         49.78;
           Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
Υ.
                                                                                                                                                                                                                                                                                                                                                               ; Score 86; DB
; Pred. No. 3.1e
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRANSMEMBRANE GLYCOP
N-LINKED (GLCNAC.
N-LINKED 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EXTERIOR MEMBRANE
                                                                                                                                                                                                                                                                                                           29
                                  update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Albert
                                                                                                                                                                                                                                                                                                                                                                     DB 1,
3.1e-05;
                                                                                                                   ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jagodzinski L.,
t J., Gallo R.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                  9;
                                                                                                                                                                                                                                                                                                                                                                                                                Length 846;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GLYCOPROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        replication
                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            de
                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        competent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rossi
                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Α.,
                                                                                                                                                                                                                                                                                                                                                               0
     THE TERMS OF THE T
                                                                                                             CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                 CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                               CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AIDS; COA
Signal.
SIGNAL
CHAIN
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
```

```
This SWISS-PROT entry is copyright. It is produced through a c between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE-89228766; PubMed-2713163;
Srinivasan A., York D., Butler D. Jr., Jannoun-Nasr
MCCormick J., Ou C.Y., Myers G., Smith T., Chen E.;
"Molecular characterization of HIV-1 isolated from a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; M15896; AAB53948
PIR; A44963; A44963.
HIV; M15896; ENV$Z321.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human immunodeficiency virus type 1 (Zaire HZ321 isolate) (HIV-1). Viruses; Retroid viruses; Retroviridae; Lentivirus. NCBI_TaxID=11692; [1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Envelope polyprotein GP160 precursor [Contains: Exterior membrane glycoprotein (GP120); Transmembrane glycoprotein (GP41)].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           in 1976: nucleotide sequence comparison to r
generation of hybrid HIV.";
AIDS Res. Hum. Retroviruses 5:121-129(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000328; Env_GP41.
InterPro; IPR000777; Gp120.
Pfam; PF00516; Gp120; 1.
Pfam; PF00517; GP41; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Coat protein; Polyprotein; Glycoprotein; Transmembrane;
     AAB53948.1;
     .'
BY SIMILARITY
BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EXTERIOR MEMBRANE GLYCC
TRANSMEMBRANE GLYCC
BY SIMILARITY.
BY SIMILARITY.
 GELCHAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GLYCOPROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            m a serum
isolates
                 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₽
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          by and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Getchell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                collected
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ons on its
in no way
commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ٦.
```

```
RESULT
ENV_HV1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _HV1Y2
                                                                                                                                                                                                                                                               Signal.
SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUN-1994 (Rel. 29, Created)
01-JUN-1994 (Rel. 29, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
Envelope polyprotein GP160 precursor [Contains: Exterior membrane glycoprotein (GP120); Transmembrane glycoprotein (GP41)].
CARBOHYD
CARBOHYD
CARBOHYD
                                                                            CHAIN
TRANSMEM
DISULFID
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                    Pfam; PF00516; GP120;
Pfam; PF00517; GP41; AIDS; Coat protein; Pc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shaw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-93021387; PubMed=1404605; MEDLINE-93021387; PubMed=1404605; Price
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENV_HV1Y2
                                                                                                                                                                                                                                                                                                                                                                      EMBL; M93258; -; NO: PIR; H44001; H44001
                                                                                                                                                                                                                                                                                                                                                                                                          entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Complete nucleotide sequence, genome organization, properties of human immunodeficiency virus type 1 i for limited defectiveness and complementation.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Viruses; Retroid
NCBI_TaxID=36377;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human immunodeficiency virus type 1 (YU-2 isolate) Viruses; Retroid viruses; Retroviridae; Lentivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P35961;
                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                            InterPro; IPR000328; Env_GP41.
InterPro; IPR000777; GP120.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This
                                         CARBOHYL
                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                      modified and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J. Virol. 66:6587-6600(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              w
                                                                                                                                                                                                                                                                                                                                                                                                                                   s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - Buropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way iffed and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ETIMODQORINSWGCKGRIICYTSARWH
| ::||| | || |:||| |: |:
ERYLKDQQLLGIWGCSGKIICPTNVPWN
                                                                                                                                                                                                                                                                                                                                                                                   м93258;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       856 AA;
 1
30
490
738
118
118
125
135
224
2224
2292
373
373
387
1299
135
138
1138
1138
1158
1184
1184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                 NOT_ANNOTATED_CDS
 96909 MW;
                                                                                                                                                                                                                                                                                                        Polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>5</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 86; DB
Pred. No. 3.26
5; Mismatches
             N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
                                                                                                       POTENTIAL.
BY SIMILAR
                                                                                                                                                                                                                                                      TRANSMEMBRANE
                                                                                                                                                                                                                                                                  EXTERIOR MEMBRANE GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8396E3F8BBBD174E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                   Y SIMILARITY.
                                                                                                                                                                                                                             SIMILARITY.
                                                                                                                                                                                                                                                                                                        Glycoprotein; Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R.W.,
GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; 1.
3.2e-05;
9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sharp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
                                                                                                                                                                                                                                                       GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HIV-1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
 (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vivo:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hahn B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          biological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               evidence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-FEB-1991
01-FEB-1991
15-JUL-1999
Envelope pol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
CARBOHYD
SEQUENCE
                            Signal.
SIGNAL
CHAIN
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ENV_HV1S1 P19550;
                                                                               Pfam;
AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
     DISULFID DISULFID
                                                                                                                                                                                                                                                                                                                   MEDLINE-90347835; PubMed-2384920;
Cheng-Mayer C., Quiroga M., Tung
"Viral determinants of human immu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                EMBL; M65024; AAA45072.1; HIV; M38428; ENV$SF162.
                                                                                                                                                                                                    entities
                                                                                                                                                                                                                                                                     This
                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=11691;
                                                                                                                                                                                                                                                                                                                                                                                                  Human immunodeficiency virus type 1 (SF162 isolate) (HIV-1).
Viruses; Retroid viruses; Retroviridae; Lentivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                          glycoprotein
                                                                                                                      InterPro; IPR000328; Env_GP41.
InterPro; IPR000777; GP120.
                                                                                                                                                                                        or send
                                                                                                                                                                                                                modified and this statement
                                                                                                                                                                                                                                                        between
                                                                                                                                                                                                                                                                                                           macrophage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  y Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
                                                                                                                                                                                                                                                                                            Virol. 64:4390-4398(1990).
                                                                                                                                                                                                                                        s SWISS-PROT entry is copyright. It ween the Swiss Institute of Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ETIMQDQQRLNSWGCKGRIICYTSARWH
| ::||| | || |::|| |: |:
ERYLRDQQLLGIWGCSGKLICTTTVPWN
                                                                                                                                                                                                                                λq
                                                                                  Coat
                                                                                             PF00516; GP120; PF00517; GP41; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         l Similarity
13; Conser
                                                                                                                                                                                        an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                        .991 (Rel. 17, Created)
991 (Rel. 17, Last sequence update)
991 (Rel. 38, Last annotation update)
1999 (Rel. 38, Last annotation update)
1999 (Rel. 38, Last annotation update)
1990 (Rel. 38, Last annotation update)
1991 (Rel. 17, Created)
1991 (Rel. 17, Last sequence update)
1992 (Rel. 17, Last sequence update)
1993 (Rel. 17, Last sequence update)
1994 (Rel. 17, Last sequence update)
1995 (Rel. 17, Last sequence update)
1996 (Rel. 17, Last sequence update)
1996 (Rel. 17, Last sequence update)
1997 (Rel. 17, Last sequence update)
1998 (Rel. 18, Last sequ
                                                                                                                                                                                                                                non-
                                                                                                                                                                                                     requires a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        381
389
395
400
435
435
598
603
612
803
                                                                                 protein;
                                                                                                                                                                                                                                                                                                          tropism, cytopathogenicity,
    1
30
503
53
118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                              profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      237
227
227
227
2291
2291
2297
3351
3351
3381
3395
3395
603
340
603
603
603
     29
502
847
73
203
                                                                                  Polyprotein; Glycoprotein;
                                                                                                                                                                                                     license
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49.1%;
46.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-LINKED (GLCNAC...
N-G69DFD971C918B71 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 85; DB
Pred. No. 4.4e
6; Mismatches
                                                                                                                                                                                                     is not removed. Usage by and for agreement (See http://www.isb-sib.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                          Tung J.W., Dina D., Levy J.; immunodeficiency virus type ogenicity, and CD4 antigen mo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-LINKED
     EXTERIOR MEMBRA
TRANSMEMBRANE (
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-LINKED
                                                                                                                                                                                                                              ght. It is produced through a collaboration Bioinformatics and the EMBL outstation titute. There are no restrictions on its ns as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GLCNAC
                                             MEMBRANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
4.4e-05;
                                GLYCOPROTEIN
                                             GLYCOPROTEIN
                                                                                   Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
```

pe 1 T-cell modulation.

`.= Q

is is

ch/announce/ in no way Indels

0;

Gaps

0

843;

(POTENTIAL)

(POTENTIAL) (POTENTIAL) (POTENTIAL) (POTENTIAL) (POTENTIAL) (POTENTIAL)

```
RESULT 11

REV_HV1W2

ID ENV_H
AC P0588

DT 01-NO
DT 01-NO
DT 15-JU
DE SHVel
DE 91-yoc
GN ENV.
OS Human
OC V1rue
OX NCBI_
RN NCBI_
RN Hahn
RX MEDL1
RY SCOU
RX Salah
RT at r:
CC -|- | |
CC -|- |
CC This
CC the
CC use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 13
                                                       This SWI
                                                                                                                                                                            SEQUENCE FROM N.A.

MEDLINE-66235450; PubMed-3012778;

Habn B.H., Shaw G.M., Taylor M.E., Redfield F.

Salahuddin S.Z., Wong-Staal F., Gallo R.C., F.

"Genetic variation in HTLV-III/LAV over time at risk for AIDS.";

Science 232:1548-1553(1986).

-1- MISCELLANEOUS: ISOLATES WMJI, WMJZ, AND W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENV_HVIW2 STANDARD; PRT; 847 AA. P05880; 01-NOV-1988 (Rel. 09, Created) 01-NOV-1988 (Rel. 09, Last sequence update) 15-JUL-1999 (Rel. 38, Last annotation update) Envelope polyprotein GP160 precursor [Contains: E glycoprotein (GP120); Transmembrane glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                           Viruses;
                                                                                                                                                                                                                                                                                                                                                                                             Human immunodeficiency
Viruses; Retroid virus
NCBI_TaxID=11705;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     575
          European
by non-
                                                                                                          MISCELLANEOUS: ISÓLATES WMJ1, WMJ2, AND
BLOOD SAMPLES SEQUENTIALLY TAKEN FROM A
WAS PERINATALLY INFECTED BY HER MOTHER.
SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ERYLKDQQLLGIWGCSGKLICTTAVPWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ETLMODOORLNSWGCKGRIICYTSARWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1194
245
245
237
237
408
408
408
1186
1186
1186
1186
2232
2332
2332
2332
2332
2332
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
233
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
233
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
233
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
233
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
233
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
233
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
2333
233
                                                                                                                                                                                                                                                                                                                                                                                                                 ciency virus type 1 (WMJ2 isolate) (HIV-1).
viruses; Retroviridae; Lentivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 85; DB pred. No. 4.4e 6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BY SIMILARITY.
BY SIM
                                                                                                                                                J1, WMJ2, AND
TAKEN FROM A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
4.4e-05;
                                                                                                                                                                                                                                            R.R., Markham P.D.,
Parks E.S., Parks W
e in patients with A
                                                                                                                                                WMJ3 WERE OBTAINED FI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 847;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Exterior membrane n (GP41)].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                              W.P.;
                                                                                                                                                   FROM
AN WHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                              õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                              Qy
```

```
RESULT 12

ENV_HV1B8 STANDARD; PR:
AC P04582;
DT 13-AUG-1987 (Rel. 05, Created)
DT 13-AUG-1987 (Rel. 05, Last sequent 15-JUL-1999 (Rel. 38, Last annote DE Envelope polyprotein GP160 precuude glycoprotein (GP120); Transmembr:
                                                                                                                                                                                                                                                                                                                                                                              Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; Pl
AIDS; Co
Signal.
SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL;
HIV; N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR000328; Env_GP41.
InterPro; IPR000777; GP120.
Pfam; PF005516; GP120; 1.
Pfam; PF00517; GP41; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                modified and this statement is not removed. Usage by and foentities requires a license agreement (See http://www.lsb-sib.or.send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                 575
                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                             ω
                                                                                                                                                                                                                                                                                                                                                                                                                            Match
                                                                                                                                                                                                                                                                            ERYLRDQOLLGIWGCSGKLICTTTVPWN
                                                                                                                                                                                                                                                                                                           ETLMQDQQRLNSWGCKGRIICYTSARWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          M12507; AAB12990.1; M12507; ENV$WMJ2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Coat
                                                                                                                                                                                                                                                                                                                                                                              l Similarity
13; Conser
                                                                                                                                                                                                                                                                                                                                                                        49.18;
nilarity 46.48;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Polyprotein;
     Transmembrane glycoprotein (GP41)]
                         sequence update)
annotation update)
precursor [Contains:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ¥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EXTERIOR MEMBRANE GLYCOPROTEIN.

TRANSMEMBRANE GLYCOPROTEIN.

BY SIMILARITY.

                                                                                                                                                                                                                                                                                                                                                                              6,
                                                                                                                                                                                                                                                                                                                                                                        Score 85; DB Pred. No. 4.466; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-LINKED (GLCNAC.
N-LINKED (GL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Glycoprotein;
                                                                                                                                                                                                                                                                               209
                                                                                                                                                                                                                                                                                                                          30
                                                                                                                                                       851
                                                                                                                                                                                                                                                                                                                                                                   .4e-05;
9;
                                                                                                                                                                                                                                                                                                                                                                                                                            DB
                                                                                                                                                    ₹
                                                                                                                                                                                                                                                                                                                                                                                                                       Length 847;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Transmembrane;
                         Exterior membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .ch/announce/
                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                commercial
                                                                                                                                                                                                                                                                                                                                                                        0
```

```
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                      DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.

MEDLINB-#85111123; PubMed=2578615;

Ratner L., Haseltine W., Patarca R., Livak K.J., Starcich

Josephs S.F., Doran E.R., Rafalski J.A., Whitehorn E.A.,

Baumeister K., Ivanoff L., Petteway S.R. Jr., Pearson M.L.

Lautenberger J.A., Papas T.S., Ghrayeb J., Chang N.T., Gal
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                    CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                               CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboratic between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no we modified and this statement is not removed. Usage by and for commercial
                                                                                                                        CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; K02011; AAA44661.1;
HIV; K02011; ENV$BH8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wong-Staal F.; "Complete nucleotide sequence of the Nature 313:277-284(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human immunodeficiency virus type 1 (BH8 isolate) (HIV-1).
Viruses; Retroid viruses; Retroviridae; Lentivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00516; GP120; Pfam; PF00517; GP41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlycoSuiteDB; P04582;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entities
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=11684;
                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000328; Env_GP41. InterPro; IPR000777; GP120.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein;
  Polyprotein;
                                                                                                                                                                                                                                                                                                                               EXTERIOR MEMBRANE GLYCOPROTEIN.

TRANSMEMBRANE GLYCOPROTEIN.

BY SIMILARITY.

                                        N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
                                                                                                                                                   N-LINKED
N-LINKED
N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                           N-LINKED
N-LINKED
N-LINKED
                                                                                                                                                                                                                                    N-LINKED
                                                                                                                                                                                                                                                                 N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Glycoprotein; Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AIDS virus, HTLV-III.";
                                        (GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                                                           (GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                                                                                                                                                                                    (GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                                                                                                                                                                                                                                                        (GLCNAC.
                          (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                              (POTENTIAL). (POTENTIAL). (POTENTIAL).
  (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gallo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a collaboration -
MBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in no way commercial
```

```
RESULT RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENV_HV1BN
P12488;
01-OCT-1989
01-OCT-1989
15-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HV1BN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-OCT-1989 (Rel. 12, Created)
01-OCT-1989 (Rel. 12, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
Envelope polyprotein GP160 precursor [Contains: Exterior membrane glycoprotein (GP120); Transmembrane glycoprotein (GP41)].
                                                                                                                                                    DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
                                                                                                                                                                                                                                                                                CHAIN
CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                        CARBOHYD
CARBOHYD
                                                                                                 CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Viruses; Retroid
NCBI_TaxID=11693;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIR; A31667; VCLJBR.
HIV; M21098; ENV$BRVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       virology 168:79-89(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Anand R.,
                                                                              CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000328; Env_GP41.
InterPro; IPR000777; GP120.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entities
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dandekar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. MEDLINE-89085613;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Biological and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30 | ::||| | | | | | | ::|| | : | :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ween the Swiss Institute or BUTHLOWN There are no rest European Bioinformatics Institute. There are no rest by non-profit institutions as long as its content by non-profit institutions as long as its content by non-profit institutions are long as the content by non-profit institutions as long as its content by non-profit institute. When its profit is not removed. Usage by an iffed and this statement is not removed. Usage by an iffed and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MISCELLANEOUS: THIS VIRUS IS CYTOPATHICALLY ACTIVE AND WAS HARVESTED FROM THE BRAIN TISSUE OF A NEUROLOGICAL AIDS PATIENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ERYLKDQQLLGIWGCSGKLICTTAVPWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PF00516; GP120; PF00517; GP41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       immunodeficiency virus type 1 (1BR isolate) (HIV-1).
es; Retroid viruses; Retroviridae; Lentivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       M21098; AAA44221.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (HIV-1BR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Thayer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49.1%;
ilarity 46.4%;
Conservative
     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  molecular from the l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PubMed=2789516;
     96644 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Polyprotein; Glycoprotein; Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Srinivasan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  characterization of human immunodeficiency brain of a patient with progressive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 85; DB. Pred. No. 4.4e. 6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6;
TRANSMEMBRANE GLYC
BY SIMILARITY.
BY
                                                                                                                                                                                                                                                                                                                                                                                                                                            EXTERIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D16A3C90857785F1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Α.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nayyar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               852
                                                                                                                                                                                                                                                                                                                                                                                                                                               MEMBRANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..4e-05;
9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                s.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                    RANE GLYCOPROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gardner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                          (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
(POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Luciw P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in no way commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
ENSULT IN AC POINT OF THE POINT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Ma
Best Loc
Matches
                                                                         EMBL: M38427; AAA45067.1;
HIV: M38427; EXV$SF33.
InterPro: IPR000328; Env_GP41.
InterPro: IPR000777; Gp120.
Pfam: PF00517; Gp41; 1.
Pfam: PF00517; Gp41; 1.
AIDS: Coat protein; Polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N_HVIS3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE=90317906; PubMed=2370688;
MODLINE=90317906; PubMed=90317906; P
                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENV_HV1S3 STANDARD; PRT; 852 AA. P19549; O1-FEB-1991 (Rel. 17, Created) O1-FEB-1991 (Rel. 17, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) Envelope polyprotein GP160 precursor (Contains: E. glycoprotein (GP120); Transmembrane glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         replication, and cytopathicity the viral genome.";
J. Virol. 64:4016-4020(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
CARBOH
CARBOH
CARBOHYD
CARBOH
CARBOH
CARBOH
CARBOH
CARBOH
CARBOH
CARBOH
CARBOH
CARBO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Viruses; Retroid
NCBI_TaxID=11690;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human immunodeficiency virus type 1 (SF33 isolate) (HIV-1). Viruses; Retroid viruses; Retroviridae; Lentivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ERYLKDOOLLGIWGCSGKLICTTAVPWN 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>۸</u>
                                                              Polyprotein; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-LINKED (GLCNAC.
N-LINKED (GL
ВУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 85;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 4.4
5; Mismatches
SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GELCHAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ль
..4e-05;
9;
                                                          Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Exterior membrane n (GP41)].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           envelope region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
RESULT 15
ENV_HVIMF
ID ENV_HV
AC P19551
DT 01-FEB
DT 01-FEB
DT 15-JUL
DE Envelo
DE 919cop
GN ENV.
OS Human
OC Viruse
OX NCBL_T
RN [1]
RP SEQUEN
RX MEDLIN
RA Steven
RT Varian
RT Varian
RT Cytoly
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
Matches 1
                                                                                                                                                                       ENV_HVIMF STANDARD; PRT; 853 AA. P19551; 01-FEB-1991 (Rel. 17, Created) 01-FEB-1991 (Rel. 17, Last sequence update) 15-JUL-1999 (Rel. 38, Last annotation update) Envelope polyprotein GP160 precursor [Contains: 91ycoprotein (GP120); Transmembrane glycoprotein
Stevenson M., Haggerty S., Lamonica C., Mann A.M., Meier C., Wasiak A., "Cloning and characterization of human immunodeficiency virus variants diminished in the ability to induce syncytium-indepency tolysis.";
                                                                                                                      Human immunodeficiency virus type 1 (MFA isolate) (HIV-1).
Viruses; Retroid viruses; Retroviridae; Lentivirus.
NCBI_TaxID=11704;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
CARBOHYD
CARBOHYD
                                                                           SEQUENCE FROM N.A. MEDLINE-90317877;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN
CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CARBOHYD
                                                                                                                                                                                                                                                                                                                                                        580
                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                   ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                               ERYLRDQQLLGIWGCSGKLICTTVPWN 607
                                                                                                                                                                                                                                                                                                                                                                                                             l Similarity 46.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
                                                      PubMed-1695254;
gerty S., Lamoni
                                                                                                                                                                                                                                                                                                                                                                                                                           49.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EXTERIOR MEMBRANE GLYCOPROTEIN.

TRANSMEMBRANE GLYCOPROTEIN.

BY SIMILARITY.

                                                                                                                                                                                                                                                                                                                                                                                                           6
                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 4.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -LINKED (GLCNAC...-LINKED (GLCNAC...
EE7BBF8D23C9910D
                                                                                                                                                                                                                                                                                                                                                                                                                         No.
                                                                                                                                                                            glycoprotein
                                                                                                                                                                                                                                                                                                                                                                                                           1.4e-05;
tes 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
           syncytium-independent
                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 852
                                                                                                                                                                            Exterior membrane n (GP41)].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                        0
                      type
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
Qy
B
                                                       Query Match 49.1%;
Best Local Similarity 46.4%;
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J. Virol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Signal.
SIGNAL
CHAIN
CHAIN
CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
                                                                                                                                                                                                                                                                                   CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; M33943; AAA44850.1; -. HIV; M33943; ENV$MFA.
                                                                                                                                                                                             CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00516; GP120; Pfam; PF00517; GP41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000328; Env_GP41.
InterPro; IPR000777; GP120.
                                                                                                                                 CARBOHYD
CARBOHYD
SEQUENCE
                                                                                                                                                                                                                                          CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                     CARBOHYD
                                                                                                                                                                               CARBOHYD
 582
                              ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Coat protein;
                 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
 ERYLKDQQLLGIWGCSGKLICTTAVPWN 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64:3792-3803(1990).
                                                                                                                                                                                                                                                                                    853 AA;
                                                                                                                                                                  Polyprotein; Glycoprotein; Transmembrane;
                                                                                                                                        96912
                                                                                                                                         WW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EXTERIOR MEMBRANE GLYCOPROTEIN.
TRANSMEMBRANE GLYCOPROTEIN.
BY SIMILARITY.
                                                                                                                                   N-LINKED (GLCNAC. . .) (POT
                                                            Score 85; DB 1;
Pred. No. 4.5e-05;
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                           N-LINKED
N-LINKED
N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED
N-LINKED
N-LINKED
N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                    N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                 N-LINKED
N-LINKED
                                                                                                                                                                                                                                                                                                                                                                               (GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       (GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GLCNAC.
(GLCNAC.
                                                                                                                                                                                                                                                                                                                                    (GLCNAC.
(GLCNAC.
                                                                                                                                                       (GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
(GLCNAC.
                                                                  9;
                                                                                           Length 853;
                                                                  Indels
                                                                                                                                                                                                  (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (POTENTIAL).
                                                                                                                                                         (POTENTIAL)
                                                                                                                                                                                       POTENTIAL)
                                                                  0;
                                                                    Gaps
                                                                     0;
```

Search completed: June

20,

Job time: 202 sec

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                     Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein - protein search, using sw model
                                                                                                                                                                                                             Pred. No.
score grea
and is der
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                                                                                                                                                                                                                     ..
                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq length: 0 seq length: 2000000000
                                                                                                                                                                                                           No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, serived by analysis of the total score distribution.
                                                                                                                                                                                                                                                  SPTREMBL_19:*

1: sp_archea:*

2: sp_bacteria

3: sp_fungl:*

4: sp_human:*

5: sp_inverteb

6: sp_mammal:*

7: sp_mhc:*

8: sp_organel:
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:
12: sp_vertebr

13: sp_vertebr
14: sp_vertebr
14: sp_vertebr
15: sp_vertebr
16: sp_bacteri
17: sp_archeaf
                                                                                                                                                               Query
Match
   76.9
76.9
76.3
776.3
776.3
776.3
776.3
776.3
776.3
776.3
776.3
776.3
776.3
776.3
776.3
776.3
776.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              June 20, 2002, 15:31:02; Search time 25.12 Seconds (without alignments) 206.602 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-605-573A-69
173
1 GRETLMQDQQRLNSWGCKGRIICYTSARWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            562222 seqs, 172994929 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 4.5
Copyright (c) 1993 - 2000 Comp
                                                                                                                                                                                                                                                                                                                                                                                       sp_archea:*
sp_bacteria:*
sp_fungi:*
                                                                                                                                                                                                                                                    sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
sp_archeap:*
                                                                                                                                                                                                                                                                                        sp_rodent:*
sp_virus:*
sp_vertebrate:*
                                                                                                                                                                                                                                                                                                                                sp_organelle:*
sp_phage:*
                                                                                                                                                                                                                                                                                                                                                 sp_invertebrate:*
sp_mammal:*
sp_mhc:*
                                                                                                                                                                                                                                                                                                                     sp_plant:*
                                                                                                                                                                Length
   161
524
179
195
576
576
219
219
219
219
219
120
143
143
172
                                                                                                                                                                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapext 0.5
    11111111111111111
                                                                                                                                                                  Ü
 Q9IEB5
Q9IEB4
Q9IEB4
Q9IEC6
Q9IEC7
Q9IEC7
Q9IEC8
Q9IEC8
Q9IEC9
Q9IEC9
Q9IEU01
Q9IHU01
Q9WRV5
Q9WRV5
Q9WRV5
Q9WRV5
                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         562222
Q9ieb5
Q9iebd
Q9iebd
Q9iec6
Q9iec6
Q9iec6
Q9iec6
Q9iec5
Q9iec5
Q9iebd
Q9ibbd
Q9ibbd
Q9ibbd
Q9ibbd
Q9ibbd
Q9ibbd
                                                                                                                                                                Description
                                                                                                                                    human
                             human
human
human
                                                                                                       human
human
human
          human
human
                                                         human
human
                                                                                    human
human
                                                                            human
immun
immun
immun
                                                immun
immun
immun
immun
immun
immun
immun
immun
immun
immun
                             immun
immun
```

123	123	123	124	124	124	124	124	124	124	124	124	124	124	124	125	125	125	125	125	126	126	126	126	126	126	126	127	127
•	•	•	•	•	•	•	•	•	•		•		•	•	72.3	•		•	•	•	•	•	•	•	•			73.4
116	114	112	545	532	517	512	225	220	213	200	183	134	126	124	418	224	114	114	111	544	243	242	232	216	130	125	242	234
15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
040458	040448	040454	Q9IED7	Q9IEFO	Q9IEE7	Q9IED2	Q9IEA0	Q9IEC9	Q9IEC4	Q9IEB8	Q9IEC1	Q9IHV4	Q9IHV1	Q9IHU7	036547	Q9IEA8	040472	040457	040452	Q9IED9	Q9IE55	Q9IE30	Q91E61	Q9IEA5	Q9IHU9	Q9IHU8	Q9IE31	Q9IEC2
040458	040448	040454	Q91ed7		Q91ee7	Q91ed2	Q91ea0	Q91ec9	Q91ec4	Q91eb8	Q91ec1	Q91hv4	Q91hv1	Q91hu7	036547	Q91ea8	040472	040457	040452	Q91ed9	Q91e55	Q91e30	Q91e61	Q91ea5	Q91hu9	访	Q91e31	Q91ec2
					humar	human											human						human			human	human	human
_				1 immun	nummir	-				1mmun		nummi	_	_	-		1 immun	_	_	_	1 immun	1 immun	1 immun	1 immun			_	1 immun

ALIGNMENTS

	*	
Qy 3 ETLMQDQORLNSWGCKGRII : :	Query Match Best Local Similarity 78.6 Matches 22; Conservative	RESULT 1 Q91EB5 ID Q91EB5 PRELIMINARY; PRT; AC Q91EB5; DT 01-OCT-2000 (TrEMBLrel. 15, Create DT 01-DCT-2000 (TrEMBLrel. 19, Last; DT 01-DEC-2001 (TrEMBLrel. 19, Last; DT 01-DEC-2001 (TrEMBLrel. 19, Last; DT 01-DEC-2001 (TrEMBLrel. 19, Last; DE GP41 (FRAGMENT). GN ENV. GN ENV. GN ENV. GN Human immunodeficiency virus type OC Viruses; Retroid viruses; Retrovi) OX NCBI_TaxID=11076; RN [1] RP SEQUENCE FROM N.A. RC STRAIN=BCF57; RA ROQUES P., Robertson D., Sandrine RA ROQUES P., Robertson D., Sandrine RA ROQUES P., Robertson D., Sandrine RA Philippe M.; RT "Phylogenetic analysis and sub-type RI Submitted (JAN-1999) to the EMBL/O DR EMBL; AJ336405; CAB96253.1; DR InterPro; IPR000328; Env_GP41. DR Ffam; PF00517; GP41; 1. KW Transmembrane. FT NON_TER 161 161 SQ SEQUENCE 161 AA; 19305 MW; 5E;
ETLMODQORLNSWGCKGRIICYTSARWH 30 : : : : ETLIQNQORLNIMGCKGRIICYTSVKWN 58	76.9%; Score 133; DB 15; Length 161; milarity 78.6%; Pred. No. 7.5e-13; Conservative 4; Mismatches 2; Indels 0; Gaps 0;	Q9IEB5 PRELIMINARY; PRT; 161 AA. Q9IEB5; Q9IEB5; Q1-CCT-2000 (TrEMBLrel. 15, Created) Q1-CCT-2000 (TrEMBLrel. 15, Last sequence update) Q1-CCT-2000 (TrEMBLrel. 19, Last annotation update) Q91-DEC-2001 (TrEMBLrel. 19, Last sequence update) Q

```
ACCOMPAND DE RACCOMPAND DE RACCOMPAND DE RACCOMPANDE RACCOMPAND DE RACCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
Q9IEB4
                                                                                                                                                                                                                                                          ACCOMPANDATION OF STILL SOLUTION OF STILL SOLUTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
밁
                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Ma
Best Loc
Matches
                                                                                                              Query Match
Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-2000
01-OCT-2000
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-OCT-2000
01-OCT-2000
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9IED3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Roques P., Robertson D., Damond F., Sousquiere S., Maucle. Depienne C., Brun-Vezinet F., Dormont D.; "HIV-1 group O phylogenetic analysis of C2-gp41 region."; submitted (FEB-1999) to the EMBL/GenBank/DDBJ databases. EMBL; AJ133074; CAB96235.1; -...
InterPro; IPR000777; GP120.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human immunodeficiency virus type 1. Viruses; Retroid viruses; Retroviridae; RCBI_TaxID=11676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENV POLYPEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                          "Phylogenetic analysis and sub-typing Submitted (JAN-1999) to the EMBL/GenBa EMBL; AJ236406; CAB96254.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=BCF58;
Roques P., Robertson
Philippe M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human immunodeficiency virus type 1.
Viruses; Retroid viruses; Retroviridae; Lentivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GP41 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9IEB4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9IEB4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ptam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=BCF57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=11676;
                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR000328;
Pfam; PF00517; GP41;
                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                       NON_TER
                                                                                                                                                                                                                                                                                                                        NON_TER
                                                                                                                                                                                                                                                                                                                                                   Transmembrane.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              y Match 76.9%;
Local Similarity 78.6%;
hes 22; Conservative
34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Coat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ETLIQUOORLNLWGCKGRIICYTSVKWN
ETLIQNQQRLSLWGCKGRIICYTSAKWN
                             ETLMQDQQRLNSWGCKGRIICYTSARWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PF00516; GP120; 1
PF00517; GP41; 1.
                                                                                                              . Similarity 78.0
22; Conservative
                                                                                                                                                                                                                                              179
179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             524
524 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0 (TrEMBLrel.
0 (TrEMBLrel.
1 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                             AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                524
59109
                                                                                                                                                                                                                                                             179
21225
                                                                                                                                           76.3%;
                                                                                                                                                                                                                                                                                                                                                                                                   Env_GP41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15,
19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15,
19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sandrine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MW;
                                                                                                                                                                                                                                                                Ĭ.
                                                                                                              Score 132; DE Pred. No. 1.2e 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last
Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 133; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sub-typing of 47 HIV-1
EMBL/GenBank/DDBJ data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C3D9FF12207AEB41 CRC64;
                                                                                                                                                                                                                                                                B060634FF1D4531B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence upannotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Polyprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
sz
     61
                                                           30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sousquiere S., Mauclere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Christel D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lentivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 15;
?.7e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A
                                                                                                                    DB 15;
..2e-12;
les 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Transmembrane.
                                                                                                                                                                                                                                                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 524;
                                                                                                                                                                         Length 179;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            group 0 isolates
                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Francois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                       0;
```

```
QUENTIAL PROPERTY OF THE CONTROL OF 
                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 22
                                     Query Match
Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9IEC6;
Q9IEC6;
01-OCT-2000
01-OCT-2000
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9IEF1;
Q9IEF1;
01-OCT-2000
01-OCT-2000
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=BCF06;
Roques P., Rol
Philippe M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Phylogenetic analysis and sub-typing of 47 HIV-1 group Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases EMBL; AJ236393; CAB96242.1; -. InterPro; IPR000328; ENV_GP41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GP41 (FRAGMENT).
                                                                                                                               NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Viruses; Retroid viruses; NCBI_TaxID=11676;
                                                                                                                                                                                                                                              Roques P., Robertson D., Damond F., Sousquiere Depienne C., Brun-Vezinet F., Dormont D.; Partin Vezinet F., Dormont D.; C2-gp4 "HIV-1 group O phylogenetic analysis of C2-gp4 Submitted (FEB-1999) to the EMBL/GenBank/DDBJ EMBL; AJ133056; CAB96217.1; IRR000338; EDV_GP41.

InterPro; IPR000377; GP120.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human immunodeficiency virus type
                                                                                                                                                                                     pfam; pr00516; GP120; 1.
pfam; pr00517; GP41; 1.
ALDS; Coat protein; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Human immunodeficiency virus type 1.
Viruses; Retroid viruses; Retroviridae;
NCBI_TaxID=11676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENV POLYPEPTIDE (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00517; GP41;
                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-BCF06;
                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Çī
   ETLMQDQQRLNSWGCKGRIICYTSARWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
22; Conserv
                                       . Similarity
22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1
195
195 AA;
                                                                                                                                   576
576 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel.) (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Robertson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                         Conservative
                                                                                                                                   AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1
195
; 22964 MW;
                                                                                                                                     576
64977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         76.3%;
78.6%;
                                                           76.3%;
78.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15,
19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15,
19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sandrine S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Retroviridae;
                                                                                                                                       MW;
                                       ; Score 132; DE
; Pred. No. 4.3e
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last
Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 132; DB 1
Pred. No. 1.3e-1
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2A63633CD0C86A85
                                                                                                                                         A21509F3C618195D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence up
annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                              Polyprotein;
                                                                                                                                                                                                                                                                                                                                                                    Sousquiere S., Mauclere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Christel D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lentivirus
                                                                                                                                                                                                                                                                                                                                  C2-gp41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lentivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      47 HIV-1 group 0 isolates.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₿
                                                             DB 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15;
-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
                                                                                  15;
                                                                                                                                                                                                                                                                                                                 databases
                                                                                                                                                                                                  Transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CRC64;
                                                                                                                                         CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 195;
                                                                                Length 576;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Francois
                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                 0
```

419

: :x

```
RESULT
OPIECA
ID
OPIECA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
         Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 75.7
Best Local Similarity 75.0
Matches 21; Conservative
                                                                                                                       NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nterPro.

nterPro.

Pfam; PF005.

Transmembrane.

Transmembrane.

100 TER 219 210

219 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  040456;
                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                            STRAIN-GROUP O;
Bibollet-Ruche F., Ekasa E., Peeters M.,
"Molecular characterization of envelope to
14 new human immunodeficiency virus type
different African countries."
                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
ENVELOPE TRANSMEMBRANE GLYCOPROTEIN (FRAGMENT).
Human immunodeficiency virus type 1.
Viruses; Retroid viruses; Retroviridae; Lentivirus.
NCBI_TaxID-11676;
                                                                                                                                                                                                            InterPro; IPR000328; Env_GP41.
Pfam; PF00517; GP41; 1.
                                                                                                                                                                                                                                                             Submitted (DEC-1996) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                       Transmembrane.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Phylogenetic analysis and sub-typing of 47 HIV-1 group O isolates."; Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases. EMBL; AJ236391; CAB96240.1; -
InterPro; IPR000328; Env_GP41.
Pfam; PF00517; GP41; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9IEC8
Q9IEC8;
Q9IEC8;
01-OCT-2000 (TremBLrel. 15,
01-OCT-2000 (TremBLrel. 15,
01-DEC-2001 (TremBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Roques P.,
Philippe M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN-BCF02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human immunodeficiency vi
Viruses; Retroid viruses;
NCBI_TaxID=11676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GP41 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ETLIQNOOLLNSWGCKGRIVCYTSVKWN 75
                                                                                                                                                                                                                                                      Y09772; CAA70911.1;
                                                                                                                     114
114 AA;
         75.1%;
ilarity 75.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Robertson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                114
; 13737 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1
219
25363 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        75.7%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                virus type 1.
es; Retroviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sandrine S.,
  Score 130; DB; Pred. No. 1.5e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 131; DB 15;
Pred. No. 2.1e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                              7907F77F5B51FA9D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85C2DC5B5F528907 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Christel D.,
                                                                                                                                                                                                                                                                                                            , Delaporte E.;
transmembrane glycoprotein
1 group O strains from
                         DB 15;
.5e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lentivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ą
                                            Length 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 219;
    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Francois
  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
```

```
Q9IEB6
AC QSC
AC
Query Match
Best Local Similarity
Thehes 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 20; Conserv
                                                                                                                                NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q91EB6;
01-OCT-2000 (TrEMBLrel. 15,
01-OCT-2000 (TrEMBLrel. 15,
01-DEC-2001 (TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Transmembrane.
NON_TER 1
NON_TER 216
SEQUENCE 216
                                                                                                                                                                                                     "Phylogenetic analysis and sub-typing of 47 H Submiltred (JAN-1999) to the EMBL/GenBank/DDBJ EMBL; AJ236404; CAB96552.1; -- ThrerPro; IPR000328; Env_GP41.
                                                                                                                                                                                                                                                                                                                                                                      Human immunodeficiency virus type 1.
Viruses; Retroid viruses; Retroviridae;
NCBI_TaxID-11676;
                                                                                                                SEQUENCE
                                                                                                                                                                   Transmembrane.
                                                                                                                                                                                       Pfam; PF00517; GP41;
                                                                                                                                                                                                                                                                                  Philippe M.
                                                                                                                                                                                                                                                                                                 Roques P.,
                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GP41 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Phylogenetic analysis and sub-typing of 47 HIV-1 group Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases EMBL; AJZ36394; CAB96243.1; -. InterPro; IPR000328; Env_GP41. Pfam; PF00517; GP41; 1.
                                                                                                                                                                                                                                                                                                                     STRAIN-BCF14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9IEB6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Roques P., Robertson D., Philippe M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-OCT-2000
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-BCF07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Viruses; Retroid
NCBI_TaxID=11676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human immunodeficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GP41 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09IEC5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9IEC5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   æ
                                                                                                              219
219 /
                                                                                                                                                                                                                                                                                               Robertson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1
216
216 AA;
                 74.6%;
ilarity 71.4%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ) (Tremblrel.) (Tremblrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                                                                                                              AĄ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1
216
25027 ►
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ciency virus type 1.
viruses; Retroviridae;
                                                                                                            219
25353
                                                                                                                                                                                   Env_GP41.
                                                                                                                                                                                                                                                                                               D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             74.68;
                                                                                                                                                                                                                                                                                             Sandrine S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15,
19,
                                                                                                            ₩;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sandrine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WW;
           Score 129; DB 15;
Pred. No. 4.4e-12;
6; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 129; DE
Pred. No. 4.3e
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                        F65829EB01520D91 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    413AE9BBF1B4FC9A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          219
                                                                                                                                                                                                                                                                                       Christel D., Francois
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of 47 HIV-1 group O isolates.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Christel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        216 AA.
                                                                                                                                                                                                                                                                                                                                                                                        Lentivirus
                                                                                                                                                                                                                                                        47 HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lentivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 15;
.3e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15;
                                                                                                                                                                                                                                      [V-1 group O isolates.";
databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D.
                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Francois
                                                   219;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               216;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

Indels

0;

Gaps

0

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
PRESULT OR PRESULT IN 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           O11940
O11940;
O11940;
O11940;
O12940;
O12JUL-1997 (TrEMBLrel. 04, Created)
O1_JUL-1997 (TrEMBLrel. 19, Last sequence update)
O1_DEC-2001 (TrEMBLrel. 19, Last annotation update)
ENVELOPE GLYCOPROTEIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9IHU1;
Q9IHU1;
01-OCT-2000 (
01-OCT-2000 (
01-DEC-2001 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-97340911; PubMed-9197385;
Brennan C.A., Hackett J. Jr., Zekeng
Hickman R.K., Gurtler L., Kaptue L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human immunodeficiency virus type 1.
Viruses; Retroid viruses; Retroviridae; Lentivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=11676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Transmembrane.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR000328; Env_GP41.
Pfam; PF00517; GP41; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AIDS Res. Hum. Retroviruses 13:901-904(1997).
EMBL; U90133; AAB62816.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Devare S.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                             type 1 group O.";
AIDS Res. Hum. Retroviruses 16:1075-1081(2000)
EMBL; AF229243; AAF71920.1; -.
InterPro; IPR000328; Env_GP41.
                                                                                                                                                                                                                                                                                                                                                              Human immunodeficiency virus type 1. Viruses; Retroid viruses; Retroviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
ENVELOPE GLYCOPROTEIN (FRAGMENT).
                                                                                                                                                                          Yang C., Gao F., Fonjungo P.N., Zekeng
Pieniazek D., Schable C., Lal R.B.;
"Phylogenetic analysis of protease and
                                                                                                                                                                                                                                                                                                                                  Viruses; Retroid viruses; NCBI_TaxID=11676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence of gp41env immunodominant region of HIV type 1 group 0 west central Africa.";
                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. STRAIN=97CM747;
  NON_TER
                                                                                                                                                                                                                                         MEDLINE=20386754; PubMed=10933623;
                                              Transmembrane.
                                                                   Pfam; PF00517; GP41; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ETLMQDQQRLNSWGCKGRIICYTSARWH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ETLIQNQORLDLWGCKGRIICYTSVKWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
120 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
    134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
14463 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            74.0%;
                                                                                                                                                                                 protease and transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 128;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22068B4D28222E44 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 von Overbeck
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                Ŀ.,
                                                                                                                                                                                                                                                                                                                                                                  Lentivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 15;
.2e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lund J.K., Vallari
Overbeck J., Hampl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
                                                                                                                                                                                                                                van der Groen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 120;
                                                                                                                                                                                      regions
                                                                                                                                                                                                                                    .
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                          of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                             VΙΉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

: 1

```
OPWENTS
OPWENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
  Q9WRV4
                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 74.0
Best Local Similarity 75.0
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9WRV5
Q9WRV5;
01-NOV-1999
01-NOV-1999
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pfam; pF00517; GP41; 1.
Transmembrane.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Viruses; Retroid viruses; Retroviridae; NCBI_TaxID=11676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AIDS Res. Hum. Retroviruses 15:769-773(1999). EMBL; AF081814; AAD41226.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=99284364; PubMed=10357472;
Mas A., Quinones-Mateu M.E., Domingo E., Soriano
"Phylogeny of HIV type 1 group 0 isolates based o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human immunodeficiency virus type 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENVELOPE GLYCOPROTEIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-ESP1;
                                        AIDS Res.
EMBL; AF08
                                                                          MEDLINE=99284364; PubMed=10357472;
Mas A., Quinones Mateu M.E., Domingo E., Soriano "Phylogeny of HIV type 1 group O isolates based o sequences.";
                                                                                                                                                                                                                                                                                                           ENVELOPE GLYCOPROTEIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                             01-NOV-1999
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                         Q9WRV4;
                                                                                                                                                                                                                                                                                                                                                                                                                Q9WRV4
                                                                                                                                                                                                                        Viruses; Retroid viruses; NCBI_TaxID=11676;
                                                                                                                                                                                                                                                  Human immunodeficiency virus type 1.
Viruses; Retroid viruses; Retroviridae;
                     InterPro;
                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |||:|:||||: ||||||||||||:|:
ETLIQNQQRLDLWGCKGRIICYTSVKWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ETLMQDQQRLNSWGCKGRIICYTSARWH 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ETLMQNQQLLNLWGCKGRILCYTSVKWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ETLMQDQQRLNSWGCKGRIICYTSARWH 30
Res. Hum. Retroviruses 15:769-773(1999).
AF081815; AAD41227.1; -.
Pro; IPR000328; Env_GP41.
PF00517; GP41; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            134 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  143 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel. 12,
(TrEMBLrel. 12,
(TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                 (TrEMBLrel. 12,
(TrEMBLrel. 12,
(TrEMBLrel. 19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16066 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16325 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74.0%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   74.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 128; DB
Pred. No. 3.7e
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                   Created)
Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 128;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F6CBF09ABBF87403 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1E44A4C631BA10A2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               128; DB 15;
No. 3.7e-12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143
                                                                                                                                                                                                                                                                                                                                                                                                                      143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lentivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 15;
3.9e-12;
nes 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ą
                                                                                                                                                                                                                                                        Lentivirus
                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15;
                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                             on env
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        env gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
RESULT
OLIVER
DI OLIVER
DI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
079670
ID 079670
AC 079670
DT 01-NOV
DT 01-NOV
DT 01-NOV
DT 01-NOV
OS Human
OC V1ruse
OX NCBLT
RN [1]
RP SEQUEN
RX MEDLIN
RA Zekens
RT A new
RT Camero
RL J. Vir
DR InterP
DR In
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ouery Match 74.0
Best Local Similarity 71.4
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SPFE
SEQUENCE FROM N.A.

STRAIN-ABT063;

MEDLINE-97340911; PubMed-9197385;

Brennan C.A., Hackett J. Jr., Zekeng L., Lund J.K., Vallari A.S.,

Hickman R.K., Gurtler L., Kaptue L., von Overbeck J., Hampl H.,

Devare S.G.;

"Sequence of gp4lenv immunodominant region of HIV type 1 group 0 from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Sim
Matches 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J. Virol. 68:1581-1585(1994).
EMBL; L20571; AAA44864.1; -
InterPro; IPR000328; Env_GP41.
InterPro; IPR000777; GP120.
Pfam; PF00516; GP120; 1.
Pfam; PF00517; GP41; 1.
AIDS; Coat protein; Glycoprotein
SEQUENCE 876 AA; 99245 MW; A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ol1939 PRELIMINARY; PRT; 105 AA.
011939; O1-JUL-1997 (TrEMBLrel. 04, Created)
01-JUL-1997 (TrEMBLrel. 04, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
ENVELOPE GLYCOPROTEIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q79670 PRELIMINARY;
Q79670;
O1-NOV-1996 (TrEMBLTel. 01, Cr
01-NOV-1996 (TrEMBLTel. 01, Le
01-DEC-2001 (TrEMBLTel. 19, Le
ENVELOPE PROTEIN GP120/GP41.
                                                                                                                                                                                                                                                                                                                                             Human immunodeficiency virus type 1.
Viruses; Retroid viruses; Retroviridae; Lentivirus
NCBI_TaxID=11676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

MEDLINE-94149848; PubMed-8107219;

Gurtler L.G., Hauser P.H., Eberle J., von Brunn A., Knapp S.,

Gurtler L.G., Hauser P.H., Kaptue L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zekeng L., Tsague J.M., Kaptue L.,
A new subtype of human immunodeficiency virus type 1 (MVP-5180)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human immunodeficiency virus type 1.
Viruses; Retroid viruses; Retroviridae; Lentivirus
NCBI_TaxID=11676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Transmembrane.
NON_TER 1
NON_TER 143 14
SEQUENCE 143 AA; J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 ETLMODOQRLNSWGCKGRIICYTSARWH 30
||||:|:||||||||:|||||:||
|96 ETLIONOQRLNLWGCKGKLICYTSVKWN 623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 ETLMODOQRLNSWGCKGRIICYTSARWH 30
||||:|:|| || ||||||:|||| ||:
61 ETLIONOQLLNLWGCKGRIVCYTSVRWN 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 75.0
21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein; Glycoprotein; Polyprotein; Transmembrane.
876 AA; 99245 MW; A92F868E37522BAB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           74.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16331 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                74.0%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Score 128; DB ; Pred. No. 2.8e 6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۵,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 128; DB 15;
Pred. No. 3.9e-12;
4; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15A17063CCD3431D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 15;
2.8e-11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 876;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>,,</u>
```

```
В
                        ş
                                                                                      RT DR DR DR DR FT FT FT
                                                Query Match
Best Local;
                                          Matches
                                                                                                  Transmembrane.
                                                                                   NON_TER
NON_TER
SEQUENCE
                                                                                                            west central Africa.";
AIDS Res. Hum. Retroviruses 13:901-904(1997).
EMBL; U90132; AAB62815.1; -.
InterPro; IPR000328; Env_GP41.
Pfam; PF00517; GP41; 1.
Y MATCH 73.4%;
LOCAL Similarity 71.4%;
hes 20; Conservative
                                                                                  105
105 AA;
                                                                               1
105
; 12531 MW;
                                 Score 127; DB 15;
Pred. No. 4e-12;
5; Mismatches 3;
                                                                          2D3D6B5BADC4A382 CRC64;
                                   ω
••
                                                 Length 105;
                                Indels
                               0;
                              Gaps
```

Search completed: June 20, 2002, 15:34:36 Job time: 214 sec